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ECONOMIC INQUIRIES AND STUDIES

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AND
STUDIES

BY
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ECONOMIC INQUIRIES AND STUDIES

XIII.

THE UTILITY OF COMMON STATISTICS.[1]

IN commencing our labours for another session, we are painfully reminded that during the past twelve months the Society has sustained two heavy losses, in the death of Mr. Newmarch and Professor Jevons. At a meeting like the present, some tribute is due to the memory of these distinguished members. To some extent a record of Mr. Newmarch's death and services has already been preserved in our proceedings, but something, I feel, ought also to be said at this inaugural meeting, considering his many and diversified statistical labours, and the length of the period during which he was identified with us, first as Secretary and Editor of the "Journal," and afterwards as President. The death of Professor Jevons—all the more to be regretted as a lamentable accident—has occurred since the last meeting of last session, and this is the first opportunity we have had of paying a tribute to his memory.

With regard to Mr. Newmarch, it will be unnecessary to go over the record of his life in detail, or to enumerate his various works; of these a very full account will be found in the March number of the "Journal" of this year. What I should like to do now is to put on record the special consideration in which he was held here for his knowledge of economic statistics, especially trade and banking statistics, and his skill in using them. He was remarkable not merely as a statistician, but as a man of business and as an economist, and his special *forte* as a statistician was to throw light on problems connected with the theory of business—especially banking—and on the applications of political economy to the real world by means of statistics. In labours of this kind he was among the first in the field. Mr. Tooke, whom he recognized as a master, had preceded him as a pioneer, showing the way to reason out disputed points in the theory of currency and banking by statistical illustrations from actual business experience: his demonstrations on such points as the dependence of prices on credit, and the fact of a rise of prices preceding and not succeeding the expansion of a paper currency, being still among the best examples of the right use of statistics in economic discussions. But Mr. Newmarch followed in the steps of his great master with a command of facts, and a power of analyzing and grouping figures, which in the same field were at that time without example. His most signal achievement was the preparation of the last two volumes of the "History of Prices," a book well known here, though it has been long out of print. The information and comments in those two volumes on the great economic changes about the middle of the present century, including the introduction of free trade, the Bank Charter Act, the Irish famine, the French revolution of 1848-51, the gold discoveries in Russia, California, and Australia, and finally the Crimean war, make them still a most valuable record; while the discussion on many points of banking practice and economic theory, especially on all points relating to the use and abuse of credit, and the periodicity of movements in trade, remains to this day the fullest exposition on these topics to which the student can be referred. There are better books perhaps on single points, such as Mr. Bagehot's "Lombard Street," in which the constituent elements of the money market are described, and the theory of a bank reserve is set forth and illustrated; but the number and variety of topics in Mr. Newmarch's book, and the way in which the various economic movements of the time are grasped and set in one picture, make it of unique value. Whether it is the effect of the gold discoveries in bringing new resources into the money market, and giving a vast impetus to trade, or the effect of a great movement of migration on the trade of old and new countries alike, or the financial consequences of a great war, Mr. Newmarch is at home in the discussion. Apart also from the light it throws on the special questions treated, and as regards which it may be of course superseded by fuller and later statistics, and by wholly new circumstances, the book must long remain of value, I believe, as a specimen of method and of what can be done by the use of statistics. Indirectly, I believe, it has been the beginning of much financial writing, as it is really the parent of a book like M. Neumann-Spallart's "Annual Review of the World's Trade," on the one hand, and of much of that writing on "trade and finance" and those columns of "City notes" which we now see in many newspapers. Mr. Newmarch, in fact, popularized the idea that the daily changes in the movement of business can be generalized and referred to the working of the laws of human nature, and in a thousand ways the idea has been worked out and made useful to the world. That in the end the course of business will be better understood generally, with useful results both to business men and to society, there can be little doubt.

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[1] Inaugural Address as President of the Statistical Society. Delivered on Tuesday, 21st November, 1882.

Besides thus recognizing Mr. Newmarch's special place as a statistician, we are bound to say a few words here on his special services to the Society. Among these I would place in the first rank his labours as editor of the "Journal." Looking over the back numbers, it may be perceived that from the time he took the "Journal" in hand there was not only a considerable improvement in the miscellaneous information, which was more particularly in his own care, but an improvement as well in the general character of the papers read at our meetings. One explanation of this improvement must of course have been the steady growth of the Society in numbers and resources, and in the standard of statistical excellence; but the improvement was not altogether a spontaneous growth from below, it was encouraged from above in a variety of ways. I can speak from personal knowledge of Mr. Newmarch's exertions to make the best use of his materials, and to diffuse a genuine love and appreciation of the study he favoured. It was extremely characteristic of him that to the last he was strongly interested in young men. Wherever he could see any talent or liking for economics and statistics in a younger generation than his own, he was the first to applaud. I am proud to acknowledge for myself that I owe the beginning of my close connection with the business of the Society to Mr. Newmarch's kindness, and I have had reason to observe in many other cases his warm interest in youth, and the pains he took to encourage and bring others forward. His services, however, were manifold, and it is only fitting that, as he identified himself so closely with us, we should do honour to his name. The success of the Newmarch Memorial Fund must be to all of us a matter for satisfaction. The memory of the great services he rendered will be perpetuated in an appropriate manner.

In the death of Professor Jevons the Society has also sustained a very great loss. Partly because he was so much junior to Mr. Newmarch, and had probably many years of life left in which to render us distinguished service, and partly because of the engrossing nature of his literary work, which made formal business distasteful to him, Mr. Jevons never took the prominent part in the daily work of the Society for which his eminent gifts and labours as a statistician so well qualified him. He was for some years, however, one of our secretaries, a regular attendant of our meetings, and a frequent contributor to the "Journal." In the proper work of a statistician, moreover, there are few men who have left a better name on our records. I need only refer specially to three of his principal works. Twenty years ago, when he was still comparatively a young man, his book on the depreciation of gold arising from the gold discoveries justly attracted no small attention, both from the completeness of the method employed, and the striking character of the conclusion which he came to—that while there had been depreciation to a moderate extent, there had been no such depreciation as many great economists had anticipated. A few years afterwards his book on the "Coal Supply" drew attention to a problem which is inevitably raised by the limited character of the English coal field, and the rapidly increasing demands upon it. This book had a wide success of notoriety, and it was unfortunate, perhaps, that it was only too popular, the public, which seldom makes nice distinctions, running away with the notion that Mr. Jevons predicted the actual speedy exhaustion of the English coal supply. This, of course, was nonsense. His real conclusion, however, viz., that one of the present conditions of English prosperity was rapidly altering for the worse, was undeniable, and was amply justified by the experience of the coal famine of 1873. Few more interesting books have, perhaps, been written; and there are few better examples of the kind of statistical works which ought now, with the increasing breadth of statistical data, to be more largely written, viz., those dealing with the characteristic social and economic problems of the age. It is to such works statesmen and politicians must look for a right comprehension of their task. Shortly afterwards, in 1868, Mr. Jevons read a paper on the state of our gold coinage, in which the same thoroughness and completeness exhibited in all his statistical works was again conspicuous, and which has since been the model of more than one similar inquiry. Besides these, Mr. Jevons wrote many smaller works, which were all characterized by great completeness of method; but these three larger works are quite sufficient to found his reputation. They all show inventiveness and resource, and a careful attention to every point which can qualify the figures so that the real facts, and not the apparent ones, are brought out. An index number, such as he used in the first paper of all on the gold question, has proved an instrument of great value since in all inquiries on prices; and for this institution of an "index number" we may consider ourselves indebted to Mr. Jevons.[1] In the later years of his life Mr. Jevons became even better known as an economist and a writer on logic than as a statistician, the place he took being a high one; and without discussing his work in that capacity, we must recognize how his qualifications for other departments of literature were no disqualification, but the reverse, for the study and practice of statistics. His statistics would not have been as good as they were if he had not had wider interests, and a remarkable faculty for clear scientific exposition in other branches of science.

Such are the two men we have lost within the short period of twelve months. The loss is a heavy one; but few would have been more ready to recognize than those we have lost that the work remains, whatever becomes of the individual. With Mr. Newmarch this feeling, as I have already hinted, was always present. It was always of good work in statistics and not of his own good work he was thinking. If younger men could be induced to come into the field, he was but too well pleased to give up the task to them, so long as the work was done. His example and spirit will be handed down, I trust, through many generations of labourers at these meetings. In another point also the example and spirit of both Mr. Newmarch and Mr. Jevons, it may be hoped, will be imitated. I have already glanced at the point, but it may be specially emphasized. It is that they were neither of them specialists, but they were both otherwise distinguished—Mr. Newmarch as a man of business and an economist; and Mr. Jevons, as a *littérateur*, a man of science, and a logician. It will be an unfortunate day for us if men of business like Mr. Newmarch, and men of general scientific and literary eminence like Mr. Jevons, do not take an interest in our pursuits. Statistics are related to so many different sciences, and the knowledge of them is so essential to the politician and historian, that there is no study which is more certainly failing to obtain its proper place, if it is not known to and made use of by those who are identified with other pursuits and by men of general culture.

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[1] An index number was used by Mr. J. B. Smith as long ago as 1840 in giving evidence on the Bank Acts. Practically Mr. Jevons was the first to systematize the use of the method. [See my evidence given to the Gold and Silver Commission for after-acquired information on this point.]

I am sure you will not think I have taken up too much of your time in doing honour to the friends whom we have lost. I pass on with some diffidence to deal with some topic of general interest, such as you have been accustomed to have dealt with in their introductory addresses by my predecessors. In recent years the field has been very fully occupied. You have had such papers, for instance, as that of Mr. Lefevre, on the use and abuse of statistics, covering a great deal of the ground for discussion on the theory of statistics. You have had other papers by experts in particular branches of statistics, such as the addresses by my distinguished immediate predecessor,[1] on the agricultural depression of the country and the probable future of the agricultural industry. The field of new observation has thus been greatly reduced. It has occurred to me, however, that without attempting a new discussion on the theory of statistics, or giving an address on some particular topic of urgent interest, I may perhaps be able to say something useful, by pointing out some of the uses to society of the more common figures of statistics, especially those figures which assist in modifying or directing the political thought of the time, or in presenting problems for politicians and philosophers to consider, even if they do not much assist in the solution. The greater successes of statistics, and their main uses, though not so well known as they should be, are nevertheless fairly understood. The construction of life insurance tables, for instance; the means of comparing rates of mortality in different places, and between the same places at different times; the constant utility of statistics in political discussion, and their equal utility in daily business—are all matters tolerably well known and admitted. But what seems not to be so well understood is our indebtedness to the common figures of statistics for many wide and far-reaching political ideas, which influence and guide political thought and action and philosophic speculation insensibly. With the systematic collection of statistics continued for many years, there has come to be published a whole library of statistical annuals—whether they are official statistical abstracts or *annuaires*, such as many countries now publish, or unofficial publications like the "Annuaire d'Economie politique," or the "Statesman's Year Book," or M. Neumann-Spallart's " Annual Review of the World's Industry." These books, it seems to me, besides having many practical uses, supply a necessity of political thought at the present time, and are constantly and insensibly guiding political and philosophical speculation. What I propose to discuss to-night, then, are some of the more common figures which lie on the surface of the most accessible books. As with other good and common things, we have become so used to such books that we hardly know what we should miss if they were blotted out,—if public men and writers were without them, as in fact they were without them until about half a century ago. If we attempt to realize what we should do without such books, we shall not fail to see that statistics have many unsuspected uses, and not least are they useful for the knowledge they insensibly diffuse throughout the world.

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[1] Sir James Caird.

I shall deal more especially with the most common figures of all, viz., those of population. The utility of the most general notion which we derive from statistics of the distribution of the earth's surface among different races and nations is palpable. We can see at once that a small corner like Europe is closely peopled by the European family of nations, whilst the northern peoples of that family also possess a large new field of territory in North America, Australia, and Northern Asia, and the more southern peoples a large new field of territory in Central and South America. The European family is thus *de facto* in possession of a large tract of the earth's surface for its own habitation, perhaps a half or more of the area available for producing the food of civilized races. Further consideration would show what races in particular, among the nations of Europe, have this inheritance; but the point is, the predominance of the European race in mere extent of territory, coupled with the peculiarity that the bulk of this population is still living on a comparatively narrow tract in Europe. The rest of the world—China, India and Africa—is possessed by races of greatly differing type, on whose territory Europeans do not press as colonists, though they may settle in small numbers as governors, or traders, or both. Granting, on the average, a difference in point of material strength per unit of population between these European and all other races, it is easy to understand at once the idea that the future of civilization belongs to the European group, and that the problem of how the other races are to live in harmony with the European group without being jostled, and in what way they are to be affected by the European civilization, is one of the most curious presented for the solution of modern societies. If the European numbers were less, the problem might well be whether European civilization, in spite of its assumed superiority in type, could maintain itself. The numbers and rate of increase being what they are, it is easy to see that the main problem resulting from the relations of the European and non-European races cannot be whether the European civilization will be able to maintain itself by force, but how it will be affected by its varying relations to the other races.

Confining ourselves again to the European group, and first of all to the nations within European limits, another leading fact in international politics is immediately suggested by the statement of the numbers of the people. This is the existence of five leading powers —Russia, Germany, Austria, France, and the United Kingdom—each greatly stronger than any of the other powers not among the five, except two; each big enough to "take care of itself," though there are, of course, differences of strength between them; and besides these, the two others excepted, viz., Italy and Spain, which come short of a first place, but by a less degree than the minor States. All these relations of the great powers are based largely on the mere enumeration of the peoples. Three out of the five, viz., France, Austria-Hungary, and the United Kingdom, have each about the same population, in round numbers, 35 to 38 millions; one of the others—Germany—has about one-fourth more, and Russia only has a much larger number in Europe, viz., 80 millions. While numbers, therefore, are not everything, or Russia would be preponderant, which is notoriously not the case, and Germany would not, as it does, count for more than in proportion to its numbers, and the United Kingdom would not have a peculiar position among the others, on account of the undeveloped state of its military resources on the one side, and the immensity of its wealth and latent strength on the other side, yet it is obvious that the mere numbers are a most vital element in appreciating the political position of these five powers and the lesser powers around them. Perhaps if statesmen were always wise, and rulers and peoples free from prejudice and passion, the popular knowledge of the figures would be even more serviceable than it is in demonstrating the absolute insanity of offensive war. It is impossible to conceive what object any of these five great powers could gain by the misery and suffering of war with another, adequate to repay that misery and suffering: the very magnitude of the wars forbids the possibility of gain.

The past history and future prospects of the balance of power among these nations are also illustrated by a mere consideration of the numbers. We have only to glance at the population of the different States as at the close of the great wars in 1815 and as they are now, to see that great changes have happened:

	1815.		1880.	
	Population in Millions.	Per Cent. of Total.	Population in Millions.	Per Cent. of Total.
Russia in Europe	48	33	80[1]	34
Germany[2]	21	14½	45	19
Austria-Hungary	28	20	38	16
France	29	20½	37	16
United Kingdom	17	12	35	15
Total	143	100	235	100

Thus in 1815 a compact France possessed several millions more than the population of Germany, nearly twice that of the United Kingdom, and more than half that of Russia. Austria-Hungary also came near, as it now does, to the French numbers. Now the population of Germany considerably exceeds that of France; that of the United Kingdom is nearly equal, and that of Russia is more than double. These facts correspond very closely with the transfer of military preponderance on the Continent from France to Germany, and with the increasing prominence of Russia, which would probably be much more felt but for the simultaneous growth of Germany. They also explain why it is that the United Kingdom, with an economic and social development resembling that of France in many respects, has fallen less behind in the political race; why its relative position among European powers, though not what it was fifty years ago, is less weakened than that of France has been. Fifty years ago it was the leader among powers which were occupied in restraining France, singly a greater power than any. Now it is about equal in numbers to France, although its whole position is changed by the fact that no power, not even Germany, preponderates to the same extent as France once did.

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[1] The exact figure by the last census is 84 millions, but I have preferred to be a little under the mark, so as to allow a little for more exact enumeration in the latter censuses. For the present purpose the difference between 80 and 84 is immaterial.

[2] Germany was also much divided in 1815.

As regards the future again, what the figures suggest clearly is a possible rivalry between Russia and Germany, and the further relative decline of Austria and France—the United Kingdom continuing to grow, but occupying from year to year a different place, as its interest in the so-called balance of power becomes less. Our change towards Europe is, however, affected in part by the growth of our relations beyond seas, which is another of the great facts of population, evident on the surface of the figures, that I shall afterwards have to notice.

Of course these changes have had the effect of raising questions of domestic, as well as of foreign, interest; and here again we are indebted to statistics mainly for the suggestion of the questions. One of these questions is, in the case of France, what are the causes and probable consequences, socially and economically, as well as in its relations in respect of the balance of power to its neighbours, of the stationariness of the population? This is one of the most remarkable facts, both in itself and in comparison with the facts of other countries, which population statistics disclose. The present would not be the place to discuss the answer to the questions raised, or the solution of the problems involved. All I am concerned to point out is that it is to the common figures of statistics, such as did not exist until the present century, that we owe the putting of the questions for answer. But for them it would not have been quite certain whether the population of France was stationary or not. Now the facts are exactly known and even familiar, and discussion goes on. Another question presented is as to the increase of population in countries like Germany and Russia, and the rapid encroachment there has been on the unused agricultural resources of those countries. As the stationariness of the population in France, however beneficial in some social aspects, is not an unmixed good, because it weakens France in its external political relations, so the increase of population in Germany and Russia, while they still remain mainly agricultural, appears to be attended by some mischiefs. The social condition of the rural population of Germany leaves much to be desired, as we may see from the extensive emigration, and from the difficulty of increasing the national revenue. In Russia, again, the threatened difficulties appear most formidable. Until lately Russia has been largely in the condition of a new country, with vast quantities of land over which a growing agricultural population could spread. Now the European area is more or less filled up, and unless the vast territory of Siberia can be largely utilized for settlement, which appears doubtful, the pressure of population on the means of subsistence in Russia may soon become very great. The soil may be capable of supporting with better agriculture a larger population: but this is not the point. The kind of agriculture possible in any country is related to the existing capacity of the population, or to such improvements in that capacity as are in progress, and with the Russian population as it is, there are certainly traces in Russia of an increasing severity in the struggle for existence, which may at any moment become most serious. The change in the conditions of expansion for the population internally as compared with what they were fifty years ago ought at any rate to be recognized at the present day, suggested as they are by the most obvious statistics of Russian population. Italy, it may also be noticed, is fast increasing its population without any increase of new soil or corresponding increase of manufactures.

Last of all, another fact presented by these obvious figures is the dependence of the population of the United Kingdom very largely, and to a less degree of France, Germany, Belgium, and Holland, on the importations of food from abroad. The facts as to the United Kingdom have been much discussed in all their bearings lately, Mr. Bourne, as we know well, having taken a large part in the discussions; but you have only to turn to the pages of the "Statistical Abstract for Foreign Countries," to perceive that the United Kingdom is not quite isolated in the matter. It is much more dependent in degree than any other European country, but in the fact of dependence it is not altogether singular. The fact is, of course, partly due to the increase of population in far greater ratio than the increase of agricultural production, the prediction of Malthus, that the population of England would not be supported on the soil of England if it increased at anything like the rate in his time, having thus been verified, though not exactly as he anticipated; but it is also partly due to an increase in the consuming power of the same population, and the larger consumption of more expensive kinds of food, requiring larger proportionate areas to produce them. France, with a stationary population, increases its imports of food, and the increased consumption per head among our own population of the quantity of such articles as sugar and tea also suggests that articles of home agricultural production are now consumed more largely than they were twenty years ago or more by the same numbers. To these two causes combined then, the increase of population and increase of consuming power per head, coupled with a comparatively stationary agriculture, Europe owes the unique phenomenon of large masses of population supported by imports from foreign and distant countries. The social and political consequences of this new fact must be manifold, and again it is to the common figures of statistics we owe our knowledge of it. This great fact would hardly be known at all if periodic censuses and the system of recording imports and exports had not previously been introduced.

Socially and politically perhaps the phenomenon is not yet sufficiently appreciated, and as compared with what it will be, it is probably only beginning to be important, but it is one which must before long play an important part in international politics and in the economic life of nations. Both the countries which grow the surplus food and the countries which receive it are profoundly concerned.

In another way the internal growth of population in different countries of Europe is also connected with great political changes. In Germany, for instance, it was partly the special growth of the population under the Prussian monarchy which assisted to make United Germany. In Russia, again, the great growth of population outside Poland has, from year to year, and decade to decade, dwarfed the Polish difficulty as a bare question of the balance of power in Russia. But we have even a more striking case of political change from the internal changes of population nearer home. Every one must have been struck, during the last few years, by the calmness of the country generally in presence of Irish agitation, and the evident hopelessness of any insurrection arising out of that agitation. When Mr. Parnell and other Irish Members were arrested in October last year [1881], and the Land League suppressed, there was hardly even a fractional fall in consols. Forty, fifty, eighty years ago, things were entirely different, the Irish difficulty being incessantly spoken of as most menacing which indeed it was. The present calmness and the former apprehension are obviously due very much to a mere change in population numbers. Ireland, at the beginning of the century, held about one-third of the population of the United Kingdom; as late as 1840 it still held very nearly one-third; now its population is only one-seventh. Apart from all relative changes in the wealth of the populations, these changes in numbers make a vast difference in the Irish difficulty. It becomes easier for us on the one hand to bear the idea of an alien State like Ireland in our close neighbourhood, wholly independent, or possessing Home Rule like the Isle of Man or the Channel Islands: the power of mischief of such a community is less to be feared by a State of England's greatness than was the power of a separate Ireland fifty or eighty years ago, by the England of that time. A separate Ireland then might have been used by France against the very existence of the English Empire and the independence of England itself. Now this would hardly be possible either to France or to any other State. On the other hand, any possible insurrection in Ireland is as nothing to the power of the United Kingdom compared with what it would have been when Ireland held a third of the whole population. Hence the calmness of recent years in comparison with the agitation of a former period, and which is all the more remarkable because the agitated memories survive and colour a good deal of the thought about the Irish difficulty still. A still more careful examination would show, I think, that the difficulty has diminished in intensity—that it is the alien part of Ireland which has most diminished in numbers, while the loyal part—

Ulster—has relatively increased; but here again I wish to confine myself to patent and obvious figures, the lesson of which has more or less sunk into the popular mind.

It is not difficult to perceive, moreover, that these changes in figures must gradually tell more effectively than they have yet done on the Irish difficulty. In 1832 Ireland was endowed with one hundred and five members, its proportion of the population of the United Kingdom being then one-third. If one-third was then considered to entitle it to one hundred and five members, one-seventh, it is clear, would only give it at the present day about forty-five. Of these forty-five, again, one-third would be from Ulster, and almost exclusively among the remaining two-thirds, or thirty in all, if we are to judge from the present appearance, should we find Home Rulers. The parliamentary Home Rule difficulty would thus seem to have largely arisen from the failure to adapt the representation of the country to changes in the population. There is certainly nothing in the increased wealth or vigour of the Irish population, compared with that of the rest of the United Kingdom, to suggest that Ireland should have a larger representation in proportion to its population than it had in 1832; yet if its representation were only to be reduced in proportion, the parliamentary difficulty would largely disappear. Even if no greater change were now to be made than the introduction of equal electoral districts, and assuming that the present changes in population continue, and that Irish representation is adapted to the probable relative population of Ireland and the United Kingdom at the next census, then the representatives of Ireland in Parliament would be reduced from one hundred and five to eighty-three, and of these eighty-three only fifty-five would be sent from those parts of Ireland in which there is disaffection, so that the maximum number of Home Rulers, unless there are great changes of party, which I am not discussing, would apparently be less than fifty-five. Of course I am not discussing the possibility or expediency of any political changes. I am merely pointing out the ideas which the figures on the surface are suggesting for consideration, and which must affect the politics of the next few years. Here again it is the common figures of statistics—those derived from the systematic record of facts commenced within the last century, and only brought to a condition of tolerable advancement within the last fifty years, which are so fertile and suggestive.[1]

Still continuing the use of the most common statistics of population, I propose next to direct attention to one of the most formidable problems which have to be dealt with by our imperial government, and for the knowledge of which we are mainly indebted to statistics. I refer to the growth of the population of our great dependency—India. I have already referred in the most general terms to the peculiar and complicated relations which are likely to grow up between nations of the European family and the races or nations of different types. At no point are these relations more interesting than they are in connection with the supremacy the English race has gained over the subject races of India. The point of interest in these relations for our present purpose lies, however, chiefly in this—that the Roman peace we have established in India appears to be effective in removing many obstacles to the growth of population which formerly existed—what Malthus described as the natural checks—so that under our rule the Indian population is growing in numbers from year to year, and trenching with alarming rapidity on the means of subsistence. I believe I am within the mark in saying that there is no more anxious subject for the consideration of our public men. The late Mr. Bagehot I know was profoundly impressed by the fact, and repeatedly wrote his impressions, though I do not remember whether anything he wrote is collected among his published writings. Others of our leading public men and economists are also deeply impressed by the fact, though it is considered almost too delicate for public discussion. There can be no doubt, however, of the formidable nature of the problem. India has now on its 1,400,000 square miles of territory a population of 240 millions—I am dealing in round figures—or about 170 to the square mile: not an excessive proportion according to formal comparisons with other countries, but in reality leaving the people no margin. It appears, from the most careful studies, that whatever the number of people to the square mile, there is very little new and fertile soil to appropriate; that much soil has been so appropriated during the last century of our rule; and that the population continues to grow fast without any increase of the land revenue, or any other sign that land is being rapidly taken into cultivation—with signs, on the contrary, of exhaustion in the agriculture, and of an approach to the limits of production according to the means at the disposal of the population. So much is more or less accurately known by statistics; and of the cardinal fact—the magnitude and increase of the population—it is statistics from which we learn everything. The broad figures are here not so clear as they might be, because improved methods in taking the censuses have from time to time revealed larger populations than could be accounted for by taking the totals of one previous census and adding the probable or possible increase of population meanwhile; but of the actual fact of increase between two census periods there is no doubt, while the rate of increase, if we are successful in coping with famines, proves to be nearly 1 per cent. per annum. In ten years, therefore, there will be 20 millions more people in India to feed; in twenty years upwards of 40 millions more; and the problem thus brought before the Indian Government is in what way and by what means so to develop the character of the people that their industry may become more efficient upon practically the same soil. Failing any speedy alteration in the character of the people, the prospect seems inevitably to be that in India from decade to decade larger and larger masses of the semi-pauperized or wholly pauperized, the landless classes, as Sir James Caird calls them in the Famine Commission report, will grow up, requiring State subventions to feed them, and threatening all attempts to reform Indian finance, while raising social and political difficulties of the most dangerous kind. It seems certain, then, that India for many years to come will be an increasingly dangerous problem for our statesmen to deal with—the more dangerous perhaps because any change in the character of the people, bringing with it increased energy of production and increased strength of character altogether, will also bring with it a rise in the scale of living, tending to make the masses discontented instead of submissive to their lot. Whatever course events may take; our rule in India must apparently for generations become a problem of increasing difficulty and complexity. The problem is analogous to what seems to lie before a government like that of Russia, with this difference, that the government is in Russia a native institution, whereas in India it is that of an alien nation governing a host of subject races.

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[1] See *supra*, vol. i., p. 277.

I shall be told, perhaps, that if statistics suggest problems like this, they are only making us uncomfortable before the time: the evils apprehended are purely speculative. But in the case of India this cannot be said. The actual creation of a famine fund is a proof that the evil is imminent. The fund is created in order to secure that large numbers of people are kept alive in times of famine, millions being in this way semi-pauperized. The prospect is that before long there may be millions to be kept alive in non-famine and famine years alike, people without land or means of living, and without the possibility of being employed as labourers. Thus the difference between the present condition of things and what seems imminent, unless, as I have stated, there is an unlooked-for change in the character of the people, is one not of kind but of degree. The statistics only bring to light and set out an immediate difficulty. The solution at present devised of a famine fund by which millions of the Indian people are virtually pauperized is certainly not one to be contemplated with any satisfaction. It may be unavoidable, but from the point of view of civilization and progress it is little more than a confession of the hopelessness of the difficulty.

The last broad fact I shall refer to as presented and made familiar to us by these statistics of population is that of the growth of population in the United States—a subject, perhaps, of even greater interest than any I have yet referred to, and complicated also with one or two interesting questions already glanced at, viz., the existence and increase of large European populations which are supported by imports of food from new countries, and mainly from the United States. In this case I may have to make some use in passing, not merely of common and familiar figures, but of a few less generally known; but I shall use none except what are easily accessible, and in all cases the ideas to be presented will be those suggested by what is common and familiar.

The broad fact presented by the United States is that of the doubling of the population in periods of about twenty-five years. There is a little doubt about the exact population at the time of the War of Independence, and down to the first census at the beginning of the present century, but for the present purpose the figures we get are good enough:

	In Milns.		In Milns.
1780	3.0	1840	17.1
'90	4.0	'50	23.2
1800	5.3	'60	31.4
'10	7.2	'70	38.5
'20	9.6	'80	50.1
'30	12.9		

In other words, the population of the United States has multiplied itself by sixteen in the course of the century—this being the result of its doubling itself every twenty-five years for that period. In another twenty-five years, at the same rate of increase, the population will be 100 millions, in fifty years 200 millions, in seventy-five years 400 millions, and at the end of a century 800 millions! Such is the first aspect of the broad fact presented to our consideration by the increase of population in the United States. The rate is such as to be fairly bewildering in its probable consequences. The phenomenon is also without a precedent in history. There has been no such increase of population anywhere on a similar scale, and above all no such increase of a highly civilized and richly fed population. The increase is not only unprecedented in mere numbers, but it is an increase of the most expensively living population that has ever been in the world. For the idea of such an increase we are indebted exclusively to statistics. The United States, among the other new ideas of old civilizations they have had the benefit of, have had the idea of a periodical census, which is even made a part of their constitution, and as the result we have before us, not only in a general way, but with some precision, so that discussion may have an assured basis, this phenomenon of an unprecedented increase of population which is perhaps the greatest political and economic fact of the age.

The fact has altered in the first place the whole idea of the balance of power of the European nations. A century ago the European nations in their political relations thought little but of each other. Now the idea of a new Europe on the other side of the Atlantic affects every speculation, however much the new people keep themselves aloof from European politics. The horizon has been enlarged, as it were, and the mere fact of the United States dwarfs and, I think, restrains the rivalries at home. European Governments can no longer have the notion that they are playing the first part on the stage of the world's political history. And this sense of being dwarfed will probably increase in time. In this country, at any rate, we cannot but feel greatly attracted by the United States. Because of the magnitude of that country, the European continent is less to us—our relations are elsewhere.

It is in connection, however, with our own home problems of population that the increase of the United States is most interesting to us. The increase is partly at our expense, and at that of the other European nations. If the United States or some other new country had not received our emigrants, it is quite clear that our whole history would have been different from what it is. We should either have had in our midst the people who emigrated, and their descendants, straining the resources of our soil and mines and capital, or the pressure upon these resources would have checked in various ways the growth of the population itself, so that probably at this moment, but for the new countries, more people would now be living in the United Kingdom than there are, and larger numbers of the population would be paupers, or on the verge of pauperism. The actual numbers we have lost altogether, and specially to the United States, have been:

	To United States.	Altogether.
Before 1820	50,000	123,000
1820-30	100,000	247,000
'30-40	308,000	703,000
'40-50	1,094,000	1,684,000
'51-52[1]	511,000	704,000
'53-60	805,000	1,312,000
'60-70	1,132,000	1,571,000
'70-80	1,087,000	1,678,000
Total	5,087,000	8,022,000

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[1] Previous to this date the figures include foreigners.

Some correction of these figures would be necessary in the earlier years for foreigners included, and in the later years for persons returning home, but the correction in the present view would make no material difference. If these people had not emigrated, and had increased as the rest of the population has done at home, the existing population in the United Kingdom would now be many millions more than it is. The difference made by the emigration to the United States alone must be a good many millions.

The influence of the United States and other new countries has been greater still. On a rough calculation about 12 millions at least of the people of the United Kingdom live on imported food, and a certain part of the populations of Germany, France, Belgium, and Holland also live on imported food—the importations being mainly from the United States. These new countries therefore not only have permitted an increase of population in a century, till it is sixteen times the population at starting, but a much larger increase. To take the United States alone, we cannot estimate its contribution to the support of foreign populations at less than an amount equal to the support of a population of 10 millions, similar in character to that of the United Kingdom. Its exports of bread-stuffs and provisions are now about 90 million pounds annually, at the value as they leave the United States; and at £9 per head, corresponding approximately to a value in the United Kingdom of £11 per head, which is about our consumption of agricultural products per head, this would be equal to the support of 10 million persons. In other words, then, the United States, from supporting 3 millions of people a century ago, are now supporting at least 60 millions—virtually an increase of twenty times the original number. The growth of population thus becomes more astonishing than ever. Altogether there must be about 15 millions of people in Europe supported by the produce of the new countries; and adding together the populations of Canada, Australia, and the United States to this 15 millions, less a deduction for the population in these countries a century ago, there remains a total of about 70 millions of European population,[1] or about one-fifth of the population now living in Europe, which is supported by the produce of newly opened regions. The history of Europe we may well say would have been entirely different from what it has been during the last century but for the new countries. It is difficult indeed to over-estimate the extent to which the existence of a new field for population, such as the United States presents, has dominated the recent economic history of Europe. We are so accustomed to a set of economic circumstances in which population, constantly increasing in numbers and in the capacity for food consumption per head, finds practically unlimited means of expansion, that we can hardly understand economists like Malthus who were oppressed by the only too evident limits which nature, at the time he wrote, had apparently set.

It seems impossible, however, not to see that a period in which the pressure of limits to growth and expansion may again be felt is not far off. The approach of such a period seems to me to be suggested by the figures which are on the surface, and I may perhaps be permitted to anticipate that the idea of such an approach, if it is not now, will soon become a familiar subject for speculation.

The very language in which reference has been made to the increase of population in the United States itself, viz., that the present rate of increase implies twenty-five years hence a population of 100 millions, a hundred years hence a population of 800 millions, indicates that a continuance of this rate of increase may be considered incredible. It implies future changes in the industrial power of the race which we have no warrant to anticipate. The area of the United States, exclusive of Alaska, which does not count, is 3 million square miles, and of this area there are at least 1 million square miles, if not more, which are sterile or rainless, so that cultivation, so far as we can now foresee, is out of the question. There remain then 2 million square miles, and on this area a population of 800 millions would give 400 to the square mile—one-third as much again as the present population per square mile in the United Kingdom, twice as much per square mile as the population of the United Kingdom which is supported by the home agriculture, and more than twice as much per square mile as the present population of France. Allowing for the greater consuming power of people in the United States as compared with that of the French people, this is as much as to say that a rate of increase of population like what has been going on in the United States for a century is impossible in the next century, unless the power of the human race to extract food from the soil is enormously increased. No doubt the United States may lose in each decade that special force of addition to its rate of increase due to immigration. As its own population increases, the proportion of the area from which immigrants are drawn will diminish, and hence there is apparent reason to anticipate that the proportion of the immigration itself will diminish. But at present there is hardly a sign of change in the proportion of the immigration, and for some time to come at least no material difference seems likely from this cause in the rate of increase of the United States population. The increase of population between 1870 and 1880 was almost at as great a rate as any that has occurred. Besides, it does not follow that the diminution of the area from which immigrants are drawn should diminish the immigration itself. Other things being equal, a larger and larger share of the increasing population of older countries will emigrate, and if they do not emigrate they will have to be supported by the import of food from new countries, which comes to the same thing. Moreover, a much smaller increase in the United States than we have supposed, say to 400 millions only in a century, would presuppose practically so violent a change in existing economic conditions, that the difference between it and the more violent change which an increase of population to the larger figure would require need not be considered.

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[1] To make these figures quite exact, a correction ought to be made on account of the non-European element in the population of the United States, the coloured population in 1880 being about 6½ millions. The coloured population in the United States, however, is brought into competition with the European, and in some degree Europeanized. It seems unnecessary, therefore, for our present purpose, to make any correction.

The bare statement of such figures appears to me quite enough to indicate that the present economic circumstances of the European family of nations, including the United States as an offshoot and part of the family, are not likely to continue for more than a generation or two. We are within measurable distance of very great changes. No doubt there are other new lands—in Australia, in Canada, at the Cape, and elsewhere—which will be more or less available in the future; but, singly, the United States is so much the larger field, that the influence of these other new lands need not be considered. Assuming the United States to possess only half the area of new country available for the European races, a single doubling of the population, after the United States has been filled up—the work of a generation or two—would absorb all these other new lands; their existence only postpones the date when they will all be in the position calculated for America alone at the end of a century by thirty years or so. In the course of a century, then, we may affirm that the present economic circumstances of the European races which make possible an indefinite expansion of the numbers of the people, coupled with an increase of their consuming power, will have entirely changed.

The facts appear to me so interesting, that I ask leave to add something more, though the figures I have now to give you, while easily accessible, are not quite so much on the surface, and have not been popularized.

These figures relate to the actual appropriation of land for settlement, and the actual growth of population in the new and old States respectively. What I wish to bring out is that a much larger portion of the available area of the United States has been "taken for settlement" than is commonly imagined; that in fact not only the thirteen original States and their three subsections have been so taken for settlement, but what are known as the Western States, exclusive of the Pacific territories, have also been taken for settlement; that the growth of rural population in this second group of States has now brought them nearly to the level of the rural population in the older States; that there is no longer much room for growth by taking up new lands in all these portions of the States; that the remaining available area is so small as to render inevitable its being taken for settlement before very long; and that from this point, probably within twenty or thirty years, the new economic circumstances I have been referring to must begin to make themselves felt.

The total area of the United States, according to the last census, exclusive of Alaska, is given as 3,025,600 square miles, of which there is a land surface of 2,970,000 square miles. Of this the portion belonging to each of the three groups named, with the quantities of each respectively taken for settlement, is as follows, the figures being worked out from the data of area and population as given by the last census:

Area of United States and Area taken for Settlement, in Three Groups.

	Total Area.	Area taken for Settlement.
	Square miles.	Square miles.
GROUP I.		
Thirteen to sixteen original States .	393,000	362,000
GROUP II.		
Twelve Western and Southern States[1]	605,000	560,000
GROUP III.		
Remaining States and Territories—		
a. Six Far West States[2]	620,000	370,000
b. Pacific States and Territories[3] .	1,407,000	277,000
Total of Group III. . .	2,027,000	647,000
Grand Total	3,025,000	1,569,000

Thus out of the total area of 3 million odd square miles, rather more than one-half is the area taken for settlement; and the area not for settlement is almost exclusively in the last group of all. This group I have subdivided in two sections, the first comprising States like Iowa and Minnesota, more or less completely settled, and the second comprising the Pacific States and Territories; and of the first subsection, it will be observed, more than half is already included in the area taken for settlement. The question then arises—How much of the unsettled portion is available for settlement? and to this the answer must be, little. When I mention that Mr. Porter, a well-known American statistician, and one of the Tariff Commission now sitting, in his book on "The West," estimates that there are

[1] Viz., Kentucky, Tennessee, Ohio, Indiana, Illinois, Michigan, Missouri, Arkansas, Louisiana, Mississippi, Alabama, and Florida.

[2] Viz., Iowa, Wisconsin, Minnesota, Kansas, Nebraska, and Texas.

[3] Viz., California, Oregon, Dakota, Colorado, Nevada, Arizona, Idaho, Montana, Wyoming, Utah, New Mexico, Washington.

1,400,000 square miles of territory in the West, of which only a tithe will ever be available for cultivation, it will be seen that the wholly unoccupied portion of the available territory must now be reduced to very small dimensions.

The next point to which I wish to draw attention is the actual population of the first two groups, exclusive of the town population, and the proportion to the square mile. This figure I work out from the tables at pp. 26-31 of the Introduction to the Population Statistics of the United States Census:

Net Rural Population of the United States, exclusive of the Town Population, in different Groups of States, with the Numbers per Square Mile.

	Total Population.	Town Population.	Net Rural Population.	Number per Square Mile of Rural Population.
Group I. . . .	21,835,111	7,939,334	13,895,777	35
„ II. . . .	19,656,666	3,614,835	16,041,831	26½
„ III.*a* . . .	6,761,132	847,282	5,913,850	9½
„ III.*b* . . .	1,902,874	534,659	1,368,215	1
Total of III. .	8,664,006	1,381,941	7,282,065	—
Grand Total .	50,155,783	12,936,110	37,219,673	12½

Thus while the rural population in the thirteen original States is 35 per square mile, it amounts to no less than 26½ per square mile in twelve other States which we are accustomed to speak of as more or less unoccupied. This is clearly not the case. An addition of 8½ per square mile, or of little more than 5 millions in all, would make them as populous as the rural parts of the original States. Group III.*a*, though it has a larger area to fill up, would nevertheless become as populous per square mile rurally as the older group of

States by an addition of about 15 millions of population. It appears, however, that a large part of this area belongs to the rainless region; so that probably less than two-thirds of this 15 millions would fill up the available area to the limit of the thirteen original States. There remains only the last division of all; but it would seem that the available area here cannot be put at more than 400,000 square miles, on which the present rura population would be about 3 per square mile; so that if the population grows to the limit of the older States the addition to the population necessary would be about 10 to 12 millions only. Altogether an addition of about 20 to 25 millions to the rural population of the United States[1] would seem all that is required to occupy the available area in the same way that the oldest and most settled part is now occupied. When that point is reached, the present conditions of expansion must begin to change.

How long will it be till the point is reached? Some idea of this may be formed from a comparison of the increase of the total population with the increase of the city population. This is shown in a table at p. 29 of the Introduction to the Population Statistics of the Census, already referred to, from which it appears that the total population increased nearly 12 millions in the last census period, and the urban population nearly 3½ millions, so that the rural population increased 8½ millions.[2] Of course it may be urged that the rural population may have increased in the older parts of the country as well as the new, but it is interesting to observe how much of the absolute increase of population is in the second and third groups, and not in the first. This is shown in the table on the next page, extracted from the "Introduction to the United States Census."

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[1] Viz., 5 millions to second group, 10 millions to Group III.*a*, and 10 millions to Group III.*b*.

[2] The following is a copy of the figures here referred to, the urban population here accounted for, however, being somewhat less than

Population and Number of Inhabitants per Square Mile in each of Three Groups in the United States at the Date of each Census.[1]

Date.	First Group.		Second Group.		Third Group.	
	Population.	Average Density (Persons to a Square Mile).	Population.	Average Density (Persons to a Square Mile).	Population.	Average Density (Persons to a Square Mile).
1790. .	3,819,846	17.0	109,368	7.2	—	—
1800. .	4,922,070	18.5	386,413	9.8	—	—
'10. .	6,161,566	20.6	1,078,315	9.8	—	—
'20. .	7,417,432	23.8	2,216,390	11.3	—	—
'30. .	9,158,721	26.3	3,707,299	13.1	—	—
'40. .	10,638,004	30.1	6,357,392	14.5	74,057	4.7
'50. .	13,218,496	36.7	9,078,288	18.4	895,092	7.1
'60. .	15,818,547	43.8	12,637,882	24.3	2,968,892	9.5
'70. .	17,964,592	50.1	15,594,721	29.5	4,999,058	12.9
'80. .	21,835,111	60.3	19,656,666	35.1	8,664,006	13.4

Thus in the last decade about 4 millions of the total increase of population is in the second group, and 3,700,000 in the last group. At this rate, clearly, the increase of population in the second group in ten years from 1880, if all agricultural, would be such as nearly

above stated, which includes towns of a smaller size than are reckoned in this comparative table:

Number of Total Population of United States at each Census, and Number of Urban Population, with the Proportion of the Urban to the Total.

Date.	Population of United States.	Population of Cities.	Inhabitants of Cities to each Hundred of Total Population.
1790	3,929,214	131,472	3.3
1800	5,308,483	210,873	3.9
'10	7,239,881	356,920	4.9
'20	9,633,822	475,135	4.9
'30	12,866,020	864,509	6.7
'40	17,069,453	1,453,994	8.5
'50	23,191,876	2,897,586	12.5
'60	31,443,321	5,072,256	16.1
'70	38,558,371	8,071,875	20.9
'80	50,155,783	11,318,547	22.5

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[1] To prevent misunderstanding, it should be noted that the figures per square mile in this table refer to the whole population, whereas in the table on p. 30 the figures relate to the rural population only.

to fill up the country with a rural population to the level of the older States, while the same increase would go a very long way towards filling up the last group in the same way. But the speed with which the vacuum will be filled will probably be even greater. The population in the new regions grows at an increasing rate as regards amounts. In 1840 the population in the third group was about 74,000 only; in 1850 it had increased by rather more than 800,000; by 1860 there had been a further increase of 2 millions; by 1870 there had been another addition of 2 millions; and between 1870 and 1880 there is an addition of nearly 4 millions. Thus only in one decennial period, viz., between 1860 and 1870, is the increase less than about double what it had been in the previous decennial period. The increase of population in this new region at the past rate would therefore be, not 4 millions, but 8 millions, or about half what is required to fill up the region with a rural population to the level of the thirteen original States. By 1890, therefore, not only will the second group of States very probably be filled up to the level of the thirteen original States, but the work of filling up the last group of all will have advanced very nearly towards completion. In another ten years, that is by 1900, assuming the same progressive rate of increase, the addition to the population in the last group of all would be 16 millions, which would be far more than sufficient to fill up the vacuum.

There is still another way of looking at the matter. During the decennial period 1870-80, the increase of population in the United States was about equally distributed between the three groups—about 4 millions to each, the increase in the first group being, however, mainly in the cities. Assuming an equal division of the 50 millions additional population which will be on the territory of the United States in twenty-five years —and it is more likely that the Western States will have a larger proportionate share—this would give 16 millions more to the second group, or 11 millions more than is necessary to fill up the rural districts to the level of the Eastern States, and 16 millions to the third group, which would suffice to fill the rural districts to the Eastern level. Even looking at the matter in this way, then, the prospect is that the available area in the United States will be peopled up to the level of the thirteen original States, as regards the rural population, in the course of twenty-five years. But the distribution of the increase between the groups, as I have said, is likely to be unequal, and the West will probably be filled up with even greater rapidity. To look at the matter in yet another aspect: of the 50 millions additional population, assuming an increase of the town population like what has been going on in the past, about 12 millions will be a town population, leaving 38 millions as the rural increase. But unless rural population is to increase in the original States, and is also to increase in the second group to more than the present level of the original States, the whole of this 38 millions, except the 5 millions required for the growth of rural population in the second group to the level of the original States, will be left for the occupation of the available area in the third group, or double what is required. Whatever way we look at the matter then, it seems certain that in twenty-five years' time, and probably before that date, the limitation of area in the United States will be felt. There will be no longer vast tracts of virgin land for the settler. The whole available area will be peopled agriculturally, as the Eastern States are now peopled.[1]

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[1] These various calculations may be put more shortly still. Assuming the available area for settlement to be altogether 2 million square miles—and it seems not quite so much—this would absorb altogether, at 35 per square mile, a rural population of 70 millions. With that number the entire available area of the United States would have as thickly settled a rural population as the thirteen original States now have. But the present rural population being over 37 millions, only 33 millions more at the outside are needed to fill up the available area to the level of the Eastern States, or less than the

All this must involve a great change in the conditions of the growth of population and the general economic conditions of the country. It confirms in the most ample manner what was to be surmised from the bare statement of the geometric increase of population itself, pointing as it did to a population of 800 millions at the end of a century from this time. Long before that it is plain, and I think quite certainly within twenty-five years, the conditions of the expansion of population must be substantially different from what they are now.

It will be urged that it is notorious the United States can support enormous masses of population. Its available agricultural area in round figures is twelve or thirteen times that of the United Kingdom, and eight times that of France. Considering what the population of the United Kingdom or that of France is, and the superior fertility of many tracts of the United States, it appears safe enough to assume that the United States can support an indefinite increase of population, and that there is room for great expansion of population within the settled area. But assuming all this to be the case, what we may observe is that it is not quite to the present point. This is not a question of supporting a large population anyhow; *how* they are to be supported is here all-important. The moment there is little new land to occupy, the conditions of expansion must change; every year must bring nearer the date when the fruits of the soil will be extracted with increasing difficulty. The agriculture must become different from what it is now. What has been already said, moreover, as to the United Kingdom and France not supporting all their own population, and as to what the position in the United States would be, even as compared with the United Kingdom and France, if the geometric increase in the United States should continue no more than a century,

estimated addition to the rural population at the present rate of increase in the next twenty-five years.

may show that there is, after all, no room for an indefinite expansion of population within the settled area in the United States. I should like to go further, and suggest that the limits of such expansion, without a very great and almost inconceivable change in the agriculture itself, must be very narrow. Comparisons with European States on this head seem very apt to mislead. But the figure of 35 per square mile as the rural population of the older parts of the United States is, after all, one-fourth of the agricultural population of France per square mile; and there are two important differences between the agriculture of France and the United States: 1. The consuming power of the United States population is much greater, perhaps double that of the French population, so that the soil cannot be expected to support the same number of Americans as French. 2. The western farmer in the United States grows for export, not merely to the towns of the country, but abroad. A rural population one-fourth that of France may thus be quite sufficient to settle up the country. We must not come to the subject with European ideas as to the scale of living.

It would be foreign to my purpose to indulge in speculation as to what will be the consequences of this approach to a complete settlement of the United States, coupled with the fact that population, whether in the United Kingdom, or in Germany, or in the United States, shows no sign of abatement in the rate of increase. It is sufficient for my purpose to point out that as the existence of vast tracts of virgin soil in the United States has permitted, during the last hundred years, an expansion of the European population without a precedent in history, has made the economic history of Europe in that period entirely different from what it would otherwise have been, so now the approach to a complete settlement must profoundly affect the world. The conditions of economic growth will be fundamentally altered. Possibly there may be chemical or other inventions rendering possible great improvements in agriculture, which will have practically the same effect as an increase of the quantity of new land available. Possibly we may have the rate of growth of population itself checked. But with the change of one condition others must change, if the masses of European people are to remain at their present level of prosperity. If there is no change, the nature of the difficulties that will arise is obvious: the masses of labourers will have to contend under increasing difficulties[1] against a fall in the scale of living.

But while I refrain from indulging in general speculation, I may, perhaps, be allowed to point out some of the more immediate consequences which are likely to follow from an approach to complete settlement in the United States, of which we seem to be within a measurable distance. First of all there will probably be a diversion of a larger part of the stream of emigration from Europe and the Eastern States of the American Union to the north-west provinces of Canada. Here there are probably about 400,000 square miles of territory available for settlement, equal in quality to the best land in the United States West. As there is no such field in the United States itself, the stream must apparently be to the new land.[2] The second immediate consequence I should look for would be an increase of manufactures and of town population in the United States. The agricultural outlet becoming less tempting, and agricultural wages tending to fall, the population will inevitably be more and more largely drawn into manufacturing.[2] And a third consequence will probably be a check to the tide of emigration from older countries, a greater demand upon the agriculture of those countries, or at least a mitigation of the extreme competition it now sustains from virgin soils,

[1] See "Some Leading Principles of Political Economy Newly Expounded." By J. E. Cairnes, M.A. Macmillan and Co., 1874. Pp. 332-334.

[2] These anticipations are now being fulfilled [1903-4].

and possibly a reversal of the present tendency for rents to fall. Such changes may hardly be apparent for a few years, with the exception, perhaps, of the diversion of the stream of emigration to the north-west of Canada, which has begun; but it seems hardly possible to doubt that they must begin to be felt before very long—perhaps in the course of ten, and almost certainly in the course of twenty years.[1]

To sum up this long review. These easy figures of population evidently go to the heart of much of our politics and political economy. To quote only the illustrations I have given, we may say, first, they give some idea of the mass of the European populations in the world, and consequently of the overwhelming strength of European civilization. Next, as we have seen, they help to explain the existence of five leading powers in Europe, and the changes in the balance of power which have occurred in the last fifty or sixty years. They equally help to explain domestic changes in each country, such as the diminished intensity of the Irish difficulty in the United Kingdom, or the growth of social difficulties in a country like Russia through the population increasing with no other opening but a restricted agriculture, or such external difficulties as we have brought on ourselves by the conquest of India and the Roman peace we have established. Finally, they set before us in a clear light the great economic phenomenon of our time, the creation of the United States of America, and the provision by this and similar agencies for a growth of population, not only in the United States, but in Europe, which is entirely without precedent. I have endeavoured to supplement the last figures with a few others designed to throw light on the question of the continuance of this portentous growth, and the probability of a check to it; but the figures here used are also easily accessible. I trust you will agree with me that we may conclude from all this review, that the easy figures of statistics which we are all more or less familiar with are fruitful. How impossible it would be even to conceive some of the problems which are now raised for discussion if there were no statistics, and how inexplicable many of the facts of the present day and of history would become if statistics did not explain them.

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[1] As a matter of fact the second and third of these consequences have followed very much as stated in the text, while the first—the influx of population into the Canadian north-west—is now (1903) attracting no small attention.

If time permitted, it would not be difficult to show how other familiar figures in statistics also supply problems for discussion, and colour all our political thought. Let me only add, however, that the fact of these easy figures being so useful should encourage the development of the study of statistics. Familiar as are some of the things we have been discussing, it is often too evident that they are not sufficiently appreciated—that hazy ideas are widely held which a clear knowledge of statistics would disperse. Still more, not only should the accessible and easy figures be more studied, but it is most desirable to digest other masses of figures and increase the field of what can be readily understood. The difficulties in the way in some branches, as in the case of many trade figures, the figures of national income, and the like, are enormous, in consequence of the varying aspects of the data and the difficulty of impressing on the public mind some of the most elementary conceptions of the statistician, such as the propriety of using figures of trade on an imperfect basis to show progress or the reverse for a series of years, because the basis, though imperfect, is throughout the same. There is no doubt, however, that with time and attention, order can be educed of what is now chaotic to the public mind, and many facts of some complexity brought to the general knowledge. We have likewise to remember that time is working with us. The influence of simple population statistics upon political thought, and in suggesting ideas which colour literature and philosophy, which has been our theme to-night, is the result of a systematic collection of statistics, which commenced only eighty years ago, and which is still extremely deficient. We may reasonably hope for more light from statistics as time passes by, and as it becomes possible to draw out comparisons over longer periods. The statisticians of the present day labour for the future, and we need not be discouraged if in many departments we have yet to wait for results. [1882.]

XIV.

ON INTERNATIONAL STATISTICAL COMPARISONS.[1]

AN old jest runs to the effect that there are three degrees of comparison among liars. There are liars, there are outrageous liars, and there are scientific experts. This has lately been adapted to throw dirt upon statistics. There are three degrees of comparison, it is said, in lying. There are lies, there are outrageous lies, and there are statistics. Statisticians can afford to laugh at and profit by jests at their expense. There is so much knowledge which is unattainable except by statistics, especially the knowledge of the condition and growth of communities in the mass, that, even if the blunders in using statistics were greater and more frequent than they are, the study would still be indispensable. But just because we can afford to laugh at such jests we should be ready to turn them to account, and it is not difficult to discover one of the principal occasions for the jest I have quoted, and profit by the lesson.

Statistics are easily mishandled, for the simple reason, amongst others, that people like short cuts, and they are apt to take different figures and compare them with each other, because the things represented by them are called by the same names, without any consideration of the question how the figures are obtained, and whether the things compared are throughout of a like kind. Thus two states will be compared with each other as regards their revenue for Imperial purposes, without any consideration of the fact that in the one certain expenses of government are borne on the Imperial budget, which in the other are borne on the local budget, or perhaps left to private agency; or without any consideration of such a fact as the inclusion in the one budget of loans or the proceeds of the sales of public property as revenue, which in the other are excluded altogether, or specially dealt with. The statistics, however, are not lies in themselves; it is only in the handling of them that the lying takes place. I have thought it would be of interest, therefore, in a meeting like this, to raise explicitly for discussion some of the principal dangers in the handling of statistics to which the inexpert, and some of us perhaps, who think we are expert, are exposed, through the too ready comparison with each other of figures which apparently are applied to facts of a like kind, but which really cover dissimilar facts. Such a discussion becomes more and more indispensable, I think, on account of one of the most important causes of the increased diffusion of statistical knowledge in recent years—the extensive development of statistical abstracts, hand-books, year-books, manuals, dictionaries, statistical atlases, and such like works of reference. Accustomed to see quantities, which are really dissimilar in kind, placed together under the same heading, which is done primarily for the mere purpose of reference, we come to neglect the dissimilarity in our speech, and, by and by, in thought. The numbers of different communities are compared as if numbers alone were something in themselves, without any thought of the different qualities of the units: production, imports and exports, and money wages in different communities are spoken of as if they in all cases meant the same things, and without any preliminary discussion of what the figures really do mean. All this is essentially mischievous, and is contrary to the most elementary lessons in the study of statistics. It is the part of the student to re-act against the temptation to which he is exposed to use works which are only good for reference in this haphazard fashion.

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[1] Paper read at the meeting of the Australasian Association for the Advancement of Science at Hobart, January, 1892. Reprinted in "Economic Journal" for that year.

Population Statistics.

At the risk of being commonplace through enforcing considerations which no one will dispute, I propose to begin with the foundation statistics of all—those of population. It is obvious at the first sight, when the statement is made, that for very few purposes can the populations of different countries be placed together as if the units were the same. The peoples of Europe and the United States are as a rule units of a very different value from the units of population in Hindoo, Chinese, negro, and aboriginal communities. Even among European peoples themselves there are enormous differences.

It follows, then, that many questions of first importance for which statistics of population are used, cannot be discussed at all without reference to the quality of the units. The fact has only to be stated to be admitted. Among such questions, for instance, is the question of the population that a given area will support. The plain of Bengal, say, supports some seventy million Hindoos—the population, in numbers, of the United States. But if the consuming power of the Hindoo were at all like that of the average man of the United States, how many could Bengal support? The same, *mutatis mutandis*, comparing even a French or German with a United States population. The units in the different cases are entirely different. The area of the United States might suffice with the same total value of production that it now has for the support of perhaps twice as many French or Germans as it could support of people of the actual type of those now planted on the soil of the United States. The question may be turned about another way. Along with the increased capacity of consumption there may, or may not, be an increased capacity of production. If there is such an increase of the capacity of production, or even a greater proportionate increase than there is of consumption, it might well be that on the area of Bengal there could be planted an even larger population than there now is, yet with the average consuming power of the people of the United States, and not merely the average consuming power of the Hindoo. So greatly different may be the varying units of population which we are so ready to speak of as alike.

Among other questions of the same kind is that of the strength of dfferent populations for war and industry. The differences between peoples are really almost infinite, and are not always coincident as regards war and industry. The Hindoo population, for instance, appears to be differentiated from a European race in respect of fighting force to a much greater extent than it is differentiated in respect of industrial force. The Chinese population, on the other hand, though it is weaker at present than European populations in fighting power, as well as industrial power, is, perhaps, not so much differentiated as the Hindoo is, and presents altogether a more difficult problem for their possible or probable antagonists. Negro populations, again, are differentiated in a different way, having a capacity for great exertion in some directions, but not in others. Such differences among peoples are so obvious that no one will dispute them when stated.

Even if units of population were generally alike instead of varying greatly, and in all sorts of directions, another question arises with reference to frequent comparisons of population and areas. The number of inhabitants per square mile is often quoted as denoting conditions adverse or favourable to the populations concerned. But of course there are areas and areas, originally and as modified by the qualities of the people dwelling upon them. In order to make a comparison of the number of inhabitants per square mile of any practical value at all, the nature of the areas, and of the qualities of the inhabitants, must be studied, and the facts must also be adapted to the discussion of particular questions, such as the relation of area to conditions of health, and the like. To say, for instance, that Belgium has so many inhabitants to the square mile, and France so many fewer, does not mean anything, because the size of the communities compared is entirely different, and in point of fact there may be areas included in France more thickly peopled than Belgium. It is the same in the comparison of a European country with the United States. The conditions are entirely different; while not a few of the comparisons so readily made would be upset by the consideration that one-third of the area of the United States, excluding Alaska, is desert, and is, properly speaking, not inhabitable at all. A similar remark would also apply to the countries of Australasia treated as a unit. The facts are all useful enough for reference; that is not disputed; but the moment they come to be discussed, the nature of the quantities must be studied, and strict attention given to the point of the comparison attempted.

Connected with this last is another question of the same kind. What is the area which really supports a given population? If people on a given spot are able to carry on industries which enable them to buy from the rest of the world what they want, are they supported by that area, or are they not? In a sense they are supported, for they live by the industries which they carry on there. In another sense they are not, because they are not self-contained. Foreign trade is the breath of their life. But this description is applicable not merely to countries like the United Kingdom, which manufacture largely, and carry goods largely for all the world: it is equally applicable to a country like the United States, which exports food, raw cotton, and other raw materials, wherewith to buy the things of which it stands in need; or to countries like Australasia, which export wool, the precious metals and other metals, to an extent without example in history.

All these considerations are so obvious that I have to apologize for introducing them. No one, it will be urged, can make the blunder of overlooking them. But in point of fact, and this is my justification, the grossest blunders are constantly made. We know, for instance, in regard to the question of the population which a given area will support, that nothing is so common in books of travel or geographies, with reference to unoccupied or partially occupied areas, than statements that a given area will support so many million inhabitants. Nothing is said as to what kind of inhabitants. But clearly the sort of inhabitants will make all the difference. The idea of boundlessness of area so common in new countries, and which is to some extent an illusion, if I may venture the remark, is also due to neglect of the fact of quality of population. The area of a given country in a sense may be practically boundless, but it may be equally true that the full occupation of the country would imply a continual re-adaptation of the people to new economic conditions—that there is by no means boundless room for the same sort of people carrying on the same sort of industries. To the same effect, the idea of narrowness of area so common in old countries, where there is constant wonder as to what is to be done with the growing population, is based largely on the vague assumption that there must be some proportion between area and population, whereas, as we have seen, and as experience proves, populations of indefinite magnitude may be supported on narrow territory. Every city is an illustration in disproof of the supposed connection between population and area in the sense stated. Area is no doubt necessary to a wholly self-contained people, if such a people can be conceived of, short of one which occupies the whole habitable territory of the globe; but, as no nation is self-contained, there is equally no means of settling *a priori* the maximum limit of inhabitants per square mile which a community may occupy; and that a nation reaches a high maximum is no proof of its being in an unfavourable economic condition, or the reverse.

Other illustrations may be given of an underlying confusion of thought in these matters, which occasionally comes to the surface. I have seen, for instance, at home an attempt made to show that the English Empire is more aggressive than that of Russia, because in a given period it had annexed a larger area and a larger population than Russia had done, the truth being that the area annexed by either country in the period in question was largely desert, so that it hardly counted one way or the other, and that the populations annexed were of most various quality. The point of real aggressiveness or not was studiously overlooked in this ingenious statistical comparison. Constantly at home, also, there are continual discussions on the balance of power, in which the numbers of the populations and the armies they can put in the field are simply counted; whereas the whole question turns largely upon the quality of the respective populations and the state of their warlike preparations, and not so much upon mere numbers. The question of quality of population arises in a different way in those political questions which are settled by numbers at the ballot-box in democratic communities, and I am not sure but that some of the underlying assumptions of politics are based on the refusal to recognize the essential differences of different peoples, as, for instance, in the concession at home to the people of Ireland of an equality and, really, far more than an equality, of voting power and representation in the Imperial Parliament, whereas, in some qualities, such as wealth, they cannot be regarded as equal, although they may be equal, or superior, in other qualities. Commonplace, therefore, as it seems, to say that, when we see columns of comparative figures of population, we must not assume the units to be alike, the applications of the doctrine are not really commonplace. We are all subject to the influence of unexpressed and underlying assumptions, and I have only given a few out of many possible illustrations of the dangers that may arise in using these very ordinary figures without constantly thinking of what they mean.

I come finally to less debatable ground in one way, but where there is practical mischief from the misuse of figures. Nothing is more common than to compare populations which may be assumed to be racially very nearly alike, or approximating in certain qualities, but which really differ greatly from each other in regard to the distribution of the population according to age. France and Germany, for instance, are continually spoken of as if the difference of their numbers made a corresponding difference in their force. In fact the population of Germany contains a much larger percentage of children than that of France does, and the numbers of adults in the two countries do not differ so much in proportion as their total numbers do.

To show what differences there may be in the relative proportions according to ages in different communities, I have brought together certain figures extracted from the last census, in each case showing the total numbers, the total male population, the males above the age of 20, and the males between 20 and 40, in France, Germany, and the United Kingdom, respectively. (See Table A annexed.) From this it will be seen that France, with a population of close on 38 millions, has 11,828,000 males above 20; and Germany, with a population of just under 47 million inhabitants, or upwards of 20 per cent. more than that of France, has 12,435,000 males above the age of 20, or only 5 per cent. more of this class of the population than France has. The proportion of males above 20 is in the one case 31 per cent., and in the other 26½ per cent. only. In the United Kingdom, where the total numbers, by the last census available for me in preparing this paper, are less than in either France or Germany, the proportion of males above 20 to the total population is 25½ per cent. only. On the other hand, the number of males between 20 and 40 is proportioned more equally in each case to the total numbers of the population, being about a seventh. Consequently France, although it has a total male population approximating to that of Germany, in spite of its smaller numbers, has only 5,376,000 males between 20 and 40, as compared with 6,577,000 in Germany; while the United Kingdom, with its smaller population than France, had in 1881 very nearly the French numbers of males between 20 and 40. No doubt in 1891 the figures would show a still greater superiority on the part of Germany to France in this particular, while the United Kingdom would be nearly on an equality, but without the very latest figures these are good enough for illustration. France has undoubtedly a much greater mass of old lives to support in proportion to its population than either Germany or the United Kingdom. As they all have, however, the same proportion of males between 20 and 40, it follows that in Germany and the United Kingdom there is a much heavier burden of children than in France. These are material differences in the constitution of the respective populations. At present the burden on the vigorous in each case is much the same, though heaviest, perhaps, in the case of France, as the old lives may be assumed to be more costly than the young, but natural growth must inevitably make an enormous difference in a few generations. Every ten years Germany and the United Kingdom, with the same proportion of non-effectives to support that France has, add greatly to their total numbers, and increase their preponderance over France in numbers alone.

The point is not without interest in comparisons between young and old countries. There are many comparisons in which, owing to the different composition of the population in a new country from what it is in an old country, the apparent superiority of the new country is to be explained, not by any superior quality, but by the mere fact that there is a less percentage of the people at ages above 40, and a larger percentage in the prime of life, than there is in an old country. For this reason in part there may be less mortality, less sickness, and larger consumption of certain necessaries and luxuries, in a new country than there is in an old country measured *per head*. But so far as this explanation holds, there is no superiority in the race of the new country over the old. As far as rates of mortality are concerned, statisticians in Australasia are familiar with the fact, and quote rates not upon the actual population, but upon a standard population in which the totals are redistributed according to age, but the correction is required in many other directions as well.

Moreover, although statisticians are usually correct when they deal with such figures, the point is not without practical importance. I have seen arguments at home, for instance, in which the attempt has been made to prove the superiority of Australians to the people of the United Kingdom in respect of health by means of statistics of the general rate of mortality among the two populations, no account being taken of the different distribution of the populations according to age. The comparisons I have in my mind failed on another point, being based upon a hypothesis as to the connection between mortality rates and the sickness of a population which had not been proved to be true generally; but even if the hypothesis had been generally true, the neglect of the point of distribution according to age made it entirely misleading.

Mortality Statistics.

I pass on to other statistics. Reference has already been made to mortality statistics in connection with the special point of the constitution of populations according to age, but there are many other traps in using such statistics for a comparison between nations. The mere question of how the deaths are recorded, and along with that the births, as far as many inferences from the mortality statistics are concerned, here becomes important. Before the statistics of two countries can be compared there must be a certainty that the registration process as to numbers is effective and complete in each. This is not the case in all countries, and it is an especially important matter in historical investigations even in the same country; the registration of births and deaths in England, for instance, being notoriously deficient until a comparatively modern period. Even a great country like the United States is still most deficient in this vital particular; there is no such thing as a good birth and death rate for that great country. In Philadelphia some years ago a local report of the registrar of births, deaths, and marriages was put into my hands, from which it appeared that the deaths exceeded the births. I learnt on inquiry that the explanation of a fact which would have been somewhat startling if true was simply the neglect of the laws or administration in the matter of the registration of births. I do not know whether there has been improvement since in this particular city of the United States, but that there is still a lack of a uniform and effective system of registration throughout the country is most certain. It is necessary then to reiterate again and again the necessity for the utmost caution in the use of such common figures as birth and death rates. Always when a writer would make a comparison, let him see that his facts are really comparable. He must not be content to take them from a dictionary without inquiring.

These remarks hold good of other comparisons sometimes made, particularly as to the prevalence of certain kinds of disease. I need not say to an audience of experts what difficulties arise in the definition of disease, and how doctors, apart from mistakes as to what the disease really is of which a man dies, may honestly vary in their statement of the fact from the number of causes themselves, one doctor giving a proximate and another an ultimate cause. Before statistical comparisons can be made, something must be ascertained as to whether definitions and method of registration are substantially the same in the two countries compared. In historical investigations, even in the same country, the precaution is equally indispensable.

Statistics as to Character of Population.

I proceed next to statistics, from which inferences are commonly drawn as to the qualities of a population—I mean statistics on such subjects as education, crime, sexual morality, drunkenness, insolvency, and thrift. On all these points different countries have statistics, which may have a meaning when they are properly used, but which it is most difficult to use properly.

To begin with education. Which is the most fortunate population of the world as regards the general education of the people? One often hears of the United States in this connection—of the numbers of children of school age and the numbers attending school as compared with less fortunate populations. But let me take the following passage from a memorandum by Mr. (afterwards Sir Joshua) Fitch, one of Her Majesty's chief inspectors of training colleges, on the working of the Free School system in the United States, France, and Belgium:

> "In England and Wales the calculations of average attendance are made on the assumption that every school is open at least 400 times or 200 days in the year. It is on this basis that the annual returns in the official report of the Education Department state the average attendance of scholars in infant schools and departments to be 68 per cent., and that in schools for older children to be 82.2 per cent. But in the United States there is no uniform or generally accepted rule respecting the length of the school year. In the principal cities, especially in the East and West, the schools are open ten months out of twelve, and in these the statistics of attendance may be fairly compared with our own. But taking the country through, the average number of days in which the public schools are open is 129 in the year, and this fact implies that in the country places, especially in the South Atlantic and South Central States, the number of school days falls much below that average. In Alabama and in Georgia the schools are open only three months in the year, the teachers are paid by the month, and hold no permanent appointment. In Louisiana and Missouri the small sum appropriated to education by the State barely suffices to keep the schools at work more than four months in

the year. In Nebraska the returns for 5,407 schools show 3,904 to be kept open for six months and upwards, 529 for more than four but less than six months, and 974 for less than four months. In New Hampshire the average length of the school term is 22.9 weeks; in North Carolina it is twelve weeks; in South Carolina, three and a half months. In Texas the towns give an average of eight months, and the country districts five months. On the other hand, in some of the Atlantic States the rate is much higher. In Pennsylvania, exclusive of Philadelphia, in which the school year includes ten months, the average is 7.17 months; in Rhode Island, nine months eleven days; and in New Jersey, nine months ten days. It is manifest, therefore, that the figures representing the regularity of attendance require material correction and reduction before they can be properly compared with the statistics of European countries in which schools are, as a rule, kept open during nearly the whole of every year."

From this it is quite clear that one has the greatest difficulty in discussing such a question as the education of a people. You can hardly get to know to what extent children of school age are attending schools of some kind. There are other difficulties behind, as the report from which I have quoted shows, such as the difference of surroundings in which children find themselves when they leave school, the United States, from the general vigour and energy of the whole population, being much more favourable to the development of general intelligence and mental cultivation among its people than countries which may be more fortunate as regards primary school education. There is also the difficulty caused by the kind and character of secondary education, and the extent to which it is diffused. Simple at first sight as the problem seems, then, there is nothing more difficult than to compare some countries with each other as regards the degree of their education.

The second subject I have named in this connection is crime, and in thinking of it I confess I have had in mind certain comparisons which have been made in England by visitors returned from Australia to the disadvantage of Australia. There is twice the crime in Australian colonies per head of population, we have been told, that there is in England. But, as we all know who have to handle statistics, there are few statistics

so difficult to handle as those of crime. A distinction has to be made between mere police and administrative offences, which vary largely according to the things which Legislatures in their wisdom subject to fine or not, and the more serious offences, such as robbery and murder, which are what we think of when we talk of crime. But in hardly any two countries that I know of is the distinction drawn on exactly the same lines. You are almost never quite sure, therefore, what you are doing, unless you are specially careful, when you compare two countries as regards crime. Further, even if the distinctions were much the same, another difference is made by the police. You may have fewer trials and convictions in one country than in another, simply because the police for various reasons is less efficient, not because there is less crime. When comparisons, therefore, are made between the criminal statistics of two countries without attention to vital considerations like these to show that the subject has been really studied, it is safe to dismiss them without further thought.

But admitting that exact comparisons can be made, that statistics of crime in two countries are reduced to common denominators, I should like to point out that the logic of using them as indicative in any way of the general superiority of one population over another may be at fault. So far as can be judged, the so-called crime statistics of a country are not necessarily significant very much of the general quality of a population, but they may be significant only of the existence of a criminal element, which is like a disease from which a community suffers, but a disease of a superficial, and not of a vital character. One population may thus have more crime in it than another, even much more crime, but substantially the two peoples may be almost alike, the extent of the criminality in both being quite immaterial. Say, for instance, that the criminal population by which almost all the crime is done in one country is 1 in 500, or $\frac{1}{5}$ of 1 per cent., and in another population it is 1 in 250, or $\frac{2}{5}$ of 1 per cent., is not the criminal element in either so small as to tell you nothing of the general constitution of the people? Not only, therefore, must criminal statistics be used with care as far as the mere data are concerned, but the difficulty of using them as indicative of the general qualities of a population is overwhelming. They can only be used, if used at all, in conjunction with much other information and statistics.

The statistics bearing on sexual morality are equally difficult to handle. The test here that is most commonly used is that of illegitimacy; but the truth is that illegitimacy by itself tells little, for the simple reason that in a town community there may be prostitution without illegitimate births, whereas in a rural community there may be even less profligacy than in the town, but with a larger number of illegitimate births, in consequence of there being no prostitution. In one country also the births may be registered as legitimate, through the children being born in wedlock; but this may go along with a general laxity of morals of a remarkable kind. Sexual immorality is also like crime itself, even when it can be measured on the same basis in two different communities, more or less a thing apart, and it may or may not be significant of the general *morale* of the population. I suppose it is true, for instance, that the rural population of Ireland stands better, as far as statistics of illegitimacy are concerned, than that of Scotland, but it would be a rash inference that in general *morale* the rural population of Ireland is superior to the Scotch. For certain purposes the statistics are good enough, but they must not be pushed to conclusions they do not bear.

Statistics as to drunkenness also require a good deal of careful handling. In fact, I see no way myself of establishing statistically that one population is more or less drunken than another. Apart from the difficulty already referred to, arising from the different distribution of two populations according to age, so that one population has proportionately more adults than another,

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Here, too, I would also demur to the test of bankruptcy itself as indicative of the general commercial character of a people, even if figures for comparison

so difficult to handle as those of crime. A distinction has to be made between mere police and administrative offences, which vary largely according to the things which Legislatures in their wisdom subject to fine or not, and the more serious offences, such as robbery and murder, which are what we think of when we talk of crime. But in hardly any two countries that I know of is the distinction drawn on exactly the same lines. You are almost never quite sure, therefore, what you are doing, unless you are specially careful, when you compare two countries as regards crime. Further, even if the distinctions were much the same, another difference is made by the police. You may have fewer trials and convictions in one country than in another, simply because the police for various reasons is less efficient, not because there is less crime. When comparisons, therefore, are made between the criminal statistics of two countries without attention to vital considerations like these to show that the subject has been really studied, it is safe to dismiss them without further thought.

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Even if comparisons could be made, there would remain the question of the comparison of character. A working population which feeds and clothes itself well and makes itself in all ways efficient, provided it saves enough for security, may really be making more of life than a population which starves itself in the present through fear that it may starve in the future. The proper proportion of saving for a working class community is itself a subject which requires some study.

These points are of special interest in new communities where the working classes have large means. No good is done by using unsound arguments even for so excellent an object as the promotion of thrift. If examples are to be taken from other countries such as France, the so-called example should first of all be adequately explained, and a true comparison made, and then an inquiry made as to whether and how far the French example is sound and worthy of imitation. The fact already brought out as to the larger proportion of old life in France than there is in either Germany or the United Kingdom may also render saving a greater necessity there in order that as much may be got out of life as in the neighbouring countries. The requirements as to saving may thus be essentially different.

To sum up this branch of the discussion: what we may say is that the rough comparison of communities as regards moral characteristics based on statistics of education, crime, insolvency, and the like, is entirely useless and mischievous because the figures are of such a kind that values can only be assigned to them by the most careful study. To take them haphazard from statistical abstracts and dictionaries, and assume that figures called by the same names in different countries have exactly the same values, is either foolish or dishonest. Dictionaries are for reference, and are not intended to give all the materials for discussion; and when they are used for purposes for which they are no intended, all who are interested in the subjects under discussion must look out. Some dictionaries, however might be made more useful than they are by the addition of a few notes to the figures, referring to such points as the nature of the legislation applied to the subjects of the figures, the mode of collecting the latter and other vital qualifications of the figures themselves I may claim the credit of privately stifling many an argument which inquirers were going to use by taking figures from books as they found them, because I pointed out to them what different values the figures might have. But the dictionaries themselves could often put inquirers on their guard.

Industrial Statistics.

I pass on next to a class of statistics which are still more frequently used for international comparison, viz., the statistics of production, industry, and trade. There is money in the comparisons here. There are competing policies whose merits are supposed to be capable of judgment by statistics. Or a country may wish to advertise its resources so as to attract immigrants or capital. There is also the patriotic bias or sentiment to be gratified or stimulated, or the anti-patriotic bias, which is really an inverted form of the patriotic bias itself.

The leading statistics thus used may be classed under the heads of agricultural production, manufacturing production, imports and exports including shipping, wages, and, finally, accumulated wealth. The division is not a logical one, but it appears convenient for the present purpose, which is to explain the principal dangers into which the unwary in dealing with the vas branches of statistics included in this department are apt to fall.

As regards agricultural production, then, the initia difficulty of all the statistics is that which we have already had in dealing with population itself—the different value of the units which go by the same name The wheat, oats, and barley of one country, though called by the same names, are not the same as the wheat, oats, and barley of another country. There are the very greatest differences in quality, as any price list of London or other market, where grain from every part of the world is sold, would show. Yet nothing is so common as comparisons of the world's production of wheat, for instance, in which this difference of quality is ignored, and fine reasonings are indulged in where this difference of quality might seriously affect the result. What is true of grain is as true, if not more true, of live stock. There are sheep and sheep, cattle and cattle, horses and horses; in truth the agricultural live stock of any two countries, instead of being susceptible of ready comparison, can hardly be compared directly at all. The point is notoriously of great importance in historical investigations. In comparing England of the present day with the England of previous centuries the difference of the average weight and quality of the live stock called by the same names has always to be considered. In nothing in recent years, as I understand, have some continental countries such as France made more remarkable improvement than in the quality of their live stock, so that with no increase in numbers, or little increase, there has been an enormous advance in real production. But the point is of equal importance in international comparisons. If Australia is to reckon with competitors in wool production, like the Argentine Republic, the average clip per sheep in the respective countries is obviously a necessary coefficient in the calculation, and it becomes of great importance to study in what countries the average is increasing or diminishing, and so on. Officials at the head of the agricultural department in France have been greatly impressed by considerations like these, and have endeavoured to substitute a count of cattle by weight for the mere count of heads, but even a correction like this would by no means be sufficient, as there might still be serious differences of quality. The comparisons, then, of agricultural production which one often sees, in which unlike units are taken as equal without more ado, and reasoned upon as if there were no qualifications, are most misleading. Rectification to any exact degree might not in many comparisons be possible, but the consideration of the point would usually make it possible to turn the figures to support some useful conclusion.

In connection with these comparisons, it should also be noticed that many of the deductions per head and per acre, into which it is usual to convert the figures of agricultural production, are calculated to mislead, even when the units themselves are comparable, because the comparisons are with the total acreage and total population of a country, and not with the special acreage and agricultural population. What could be more useless, for instance, than to compare two countries like England and the United States as regards their production of wheat or any other agricultural product per head of the whole population, the one population living on its own wheat and other products, and the other not? All such comparisons to be of any value should be made from the purely agricultural point of view—to illustrate differences in the style of agriculture carried on, or in the fertility of any two countries. But they are often made with lingering notions that all States can, to some extent, be dealt with as agricultural units, which is far from being the case.

Coming to statistics of manufacturing production—and this to some extent applies to agricultural and mining production—what we find is that, save as to some particular industry in detail, and for the purposes of discussions of that industry by itself, there is really no common denominator between countries, except in so far as the production of their respective industries can be represented in money. The coal and iron of one country are not the same as the coal and iron of another; the wool is not the same; the cotton, woollen, and linen manufactures of the one cannot be expressed in the same units of quantity as the similar manufactures of the other; the same with manufactures of metals, leather, and wood, and with machines of all kinds. Even if there is a general likeness in industrial characteristics between any two countries such as England and France, yet the different distributions of the leading industries makes any real comparison between the two as a rule impossible, except so far as it can be done in money. To make the comparison in money, again, presents new difficulties. The value of different kinds of production cannot well be reckoned up. A country like England, with the machinery of its income tax, has special facilities for reckoning up its income as far as possessed by individuals above a certain minimum; but it has little official knowledge, by comparison, of incomes below that limit. France, again, has a special knowledge of its agricultural wealth, by means of the cadastre, and the system of registration and taxation of transfers of property, but it has not equal means of estimating its income from manufacturing. Money also is itself variable in value from time to time, as measured by the average of the commodities or services it is used to exchange, and in comparing two countries, as regards their production measured in money, no little care would be needed. I have seen few attempts to do so in which attention has been paid to the necessary conditions and difficulties, or in which the existence of such dangers and difficulties has even been recognized. The Americans in their census have attempted a great deal in this direction, but the least that can be said is that the result has not been encouraging.

Coming next to imports and exports, the point I would urge first is the initial difficulty of a bare comparison of the figures themselves. Imports and exports, instead of giving us easy statistics for many of the purposes for which they are used, are really very difficult. I refer especially to the values. Imports are stated in one country at the value of the goods as at the place of shipment; in another, as at the place of arrival. In one country the basis of the statement is a declaration of the value by the importer, checked by the Customs authorities; in another there is an efficient commission of values, which takes note of market prices, and fixes official prices for everything at more or less frequent intervals. The same with the exports. The denominators are hardly ever the same in any two countries. The result is, that there are continual misstatements by amateurs on such questions as a comparison of two countries in respect of the progress of their foreign trade, or in respect of what is called the balance of trade. The falling off of the foreign trade of one country is contrasted with the growth of the foreign trade of another country at the same time, the truth being that in the one case, owing to the system of valuing by merchants' declarations, the volume of the foreign trade expressed in money responds instantly to variations in market price, while, in the other, owing to the system of official prices fixed at intervals, the volume of trade does not respond at once to variations in market price. In one country, again, what is called an adverse balance of trade appears to be larger in proportion than it is in another country, largely because the imports are valued as at the place of arrival, including freight and other charges to that place; while in the country with which comparison is made, the value is taken at the place of shipment, and does not include such additions. In the latter case, therefore, the exports form a total more nearly approximating to that of the imports than in the former. All this confusion is due simply to the fact that the units of the imports and exports are not, in fact, the same. The record is not made in the same way.

Assuming, however, that the record is made in the same way formally, there remain some essential differences in the foreign trade of different countries, which make comparisons between them most difficult, and it is mainly to one or two of these essential differences I would now desire to call attention.

First of all, there are the differences which I discussed at length in a paper I wrote long ago on "The Use of Import and Export Statistics,"[1] due to the facts that a nation may be largely engaged in the business industries makes any real comparison between the two as a rule impossible, except so far as it can be done in money. To make the comparison in money, again, presents new difficulties. The value of different kinds of production cannot well be reckoned up. A country like England, with the machinery of its income tax, has special facilities for reckoning up its income as far as possessed by individuals above a certain minimum; but it has little official knowledge, by comparison, of incomes below that limit. France, again, has a special knowledge of its agricultural wealth, by means of the cadastre, and the system of registration and taxation of transfers of property, but it has not equal means of estimating its income from manufacturing. Money also is itself variable in value from time to time, as measured by the average of the commodities or services it is used to exchange, and in comparing two countries, as regards their production measured in money, no little care would be needed. I have seen few attempts to do so in which attention has been paid to the necessary conditions and difficulties, or in which the existence of such dangers and difficulties has even been recognized. The Americans in their census have attempted a great deal in this direction, but the least that can be said is that the result has not been encouraging.

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[1] See *supra*, vol. i., pp. 282 *et seq.*

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The next point I would urge is that the imports and exports of what I would call an *entrepôt* country are not of the same species as the imports and exports of a country which has a direct import and export trade only: that is, which exports its own home produce on the one side, and imports articles for final consumption on the other side. A country which largely receives either raw produce or produce in different degrees of advancement towards the form in which it is finally consumed, and then, after manipulating that produce to a greater or less extent, re-exports it, has obviously a very different kind of foreign trade from a country which manipulates nothing or hardly anything it receives, and does not re-export. The imports and exports in the respective cases have not the same relation to the general economic conditions of the countries concerned. To compare the *entrepôt* country with a country which has only direct foreign trade, so as to show the volume of imports and exports in respect of what is received for final consumption and what is exported of the labour of the country, it would be necessary to deduct from both sides of the account of the *entrepôt* country the value of the produce imported and afterwards re-exported in a manipulated form. In this way, I am sure, the imports and exports of the United Kingdom would be largely reduced from what they appear to be, and the United Kingdom would not appear to import so much more than some others for final consumption, or to export so much more than some others with which to obtain purchasing power abroad. Reckoning in this manner, I am not sure but that Australasia would appear even more at the head of exporting countries than it now does, the labour per head represented in its exports being truly enormous. Some countries, such as Belgium and Holland, again, would have their tale of imports and exports reduced even more than that of the United Kingdom, as their business is so very much a business of transit only. In any case these are points obviously requiring consideration, when the imports and exports of different countries are compared or contrasted. They ought not to be put together at all in any discussion till they are reduced to common denominators.

Another point I would urge is the importance of the question of size and general similarity in conditions in comparing the volume of the foreign trade of any two countries. If the United Kingdom were to be split up, and Ireland, say, were to have separate customs, the foreign trade of Great Britain would be enhanced by the addition to the account of the imports from Ireland on one side, and the exports to it on the other, which would then become foreign trade, deducting, however, the present imports into Ireland from foreign countries, and the exports from it to foreign countries which are now included in the foreign trade of the whole United Kingdom. If Holland, again, were to be united with Germany, and Belgium with France, it is doubtful whether the foreign trade of both Germany and France would be increased very much, and might not even be diminished, so much of the foreign trade of Germany and France being now with Holland and Belgium; while the aggregate foreign trade of the world would be diminished by the elimination of the two countries named as separate countries, and they would no longer appear as having the largest amount of imports and exports per head. In the same way the formation of the Australasian countries into a federation with a single Customs frontier would greatly diminish the volume of imports and exports as now stated. According to Table B appended, the imports of the Australasian colonies added together, for the year 1889, amounted to about £69,043,000, and the exports to £62,706,000; but if we separate what each colony imports from and exports to the rest of the world, excluding what it imports from and exports to its neighbours, the total would be

£40,481,000 only for imports, and £35,902,000 for exports. These would be the proper figures to use in a comparison with other countries, such as Canada or the Argentine Republic, in more or less similar economic conditions. Compared with either of these two states, and assuming for the present that the figures are made up in much the same way, as I believe is the case, the foreign trade of Australasia comes out at about double that of either of the countries named. Its exporting power is so much greater than theirs. This is a true comparison. But a comparison in which the intercolonial trade is not eliminated would give an altogether untrue notion. Australasian foreign trade would appear about thrice or four times that of Canada, instead of about double only; and this would be a false comparison. The truth is favourable enough to Australasia.

Generally, however, I should like to add that the selection of foreign trade, as specially a test of the welfare of nations, does not seem to be in any way justified. Whether the foreign trade of a given country is large or small in proportion to its whole production is an affair to a large extent of size or of historical evolution, and nothing can be made of comparisons unless attention is given to the point I have already suggested—that of size and general similarity of conditions. But it is quite conceivable that nations might approximate to each other in many respects, and the one have a large foreign trade and the other not, yet both be in much the same condition of individual prosperity. Accident might determine that the one should be more self-contained than the other, so that its exchanges with other countries should bear a less proportion to its total industry. France and England are very good illustrations of essential differences of this sort, England having much more manufacturing, shipping, and foreign trade than France, but France being certainly a highly prosperous nation, with home industries of different kinds which England either has not at all or not to the same degree, and the products of which are only or largely more than that of the United Kingdom, as their business is so very much a business of transit only. In any case these are points obviously requiring consideration, when the imports and exports of different countries are compared or contrasted. They ought not to be put together at all in any discussion till they are reduced to common denominators.

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What I would most desire to direct attention to, however, is the statistical importance of a somewhat different point. This is the distribution of the population according to remuneration. It is quite conceivable that in one of two countries the earnings, and still more the nominal wages, may be higher than in the other in every single employment which can be enumerated and compared, and yet the average earnings of the average wages-earning man may be higher in the latter country than the former, the reason being the different distribution of the people according to earnings. This can be shown very clearly in a theoretical comparison. Take first, a community of 1,000 wages-earners, with the people distributed according to earnings, in the following classes—A, B, C, D, and E—as follows:

First Community.

Class.		Per Annum.	Nos.	Total.
A.	Earnings	£50	500	£25,000
B.	"	60	200	12,000
C.	"	70	100	7,000
D.	"	80	100	8,000
E.	"	90	100	9,000
	Total		1,000	£61,000

Average per head, £61.

And compare this with another community of equal numbers, in which there are also five grades, each remunerated at a lower rate than the corresponding grade in the first community, but in which the average of the whole is higher because of the different distribution of the people among the grades:

Second Community.

Class.		Per Annum.	Nos.	Total.
A.	Earnings . .	£40	100	£4,000
B.	,, . .	50	100	5,000
C.	,, . .	60	100	6,000
D.	,, . .	70	200	14,000
E.	,, . .	80	500	40,000
	Total		1,000	£69,000

Average per head, £69.

In a comparison of rates of wages merely according to the nature of the employment, the wages in the first community would obviously appear higher than in the second, and this would be strictly true in a sense; but the inference would be untrue that the average earnings of the wages-earning classes in the first community, striking a true average, would be higher.

The principle of this theoretical comparison, I believe, helps to explain the actual facts as between an agricultural new country like the United States or Australasia and an old country like England. In the former agricultural wages are higher than in England, and almost every sort of employment, subject, however, to some qualifications, such as length of day and continuity of employment, is better paid than in England; but it is a *non sequitur*, not at first apparent, that the average earnings all round are also higher, the truth being that owing to the larger proportion of artisan classes in England the average earnings of the working classes may be as high or higher in England than in the United States, or at any rate not very far short. The mode of comparing wages in two countries is thus a most critical question. I have been often puzzled myself to explain how it is that we arrive in England at comparatively high figures for the aggregate income of the nation when most of the rates of wages are apparently so much lower—employment for employment—than they are in the United States or Australasia, and to a large extent I believe the solution I have now suggested is the true one. It is not enough, then, to compare employment with employment, but mass must be compared with mass.

Other dangers in these international statistical comparisons, such as differences in the purchasing power of money in different places, may be suggested. But I should not be disposed to lay so much stress on any other point as upon that of the relative importance of different employments in different countries. In these days of cheap freights and rapid transit, the equalization of prices in all countries has been carried very far indeed, the most important differences that remain being, I believe, artificial, arising from the protection of food products in countries like Germany and France, and the like causes. The different distribution of populations according to employments remains, however, an enduring cause of differences in their relative aggregate earnings and average earnings per head.

Wealth Statistics.

Finally I have some remarks to make on the dangers of comparisons between nations as to their aggregate wealth.

Apart from all other difficulties that of the data themselves is here very great. It is hardly possible to obtain an account of the wealth of any country on any basis that can give a minutely accurate result, and it is the more difficult to obtain such accounts for any two nations made up in exactly the same way. If one country, therefore, is made out to have an aggregate wealth of about £250 per head, and another of £300 per head, it may well be that, owing to the necessary want of exactness in the calculation itself for any country and the differences of method employed in each case, the facts represented by these figures may either be much the same, or the country whose wealth is computed at the smaller figure may really be the richer of the two. Before any comparisons can be made at all, then, the methods observed in each case must be carefully followed, and particularly it must be observed whether they are likely to give a rack valuation or not. My own impression is that, except where the differences are enormous by almost any method of calculation, but little can be made of differences between country and country. Figures that are within sight of each other as much as are £250 and £300 per head, provided much the same methods have been followed, are practically much the same thing.

The comparison, also, is of little value unless accompanied by statistics of relative income, statistics of the sources of the wealth or income, and the like information. Accumulated wealth is only one element of economic strength.

A special point of great difficulty is how to deal with the wealth of a community which includes individuals having large investments abroad, and with the wealth of another community which is indebted to persons resident abroad in its public capacity, and whose individual members are also indebted to members of other communities. To a certain extent the foreign investments of a community in the first case are not available resources. Suppose the investments to be made in a foreign country with which it goes to war, the whole resources which are counted part of its wealth would really count on the other side. In the same way a country which has borrowed largely has the whole wealth really available for many purposes without any deduction for what it has borrowed. In war with a community from which it had borrowed this would at once be apparent, but in other contingencies, also, the indebtedness is not a real deduction, the wealth belonging to the foreign non-resident being really taxable as if he were resident. I have thought it expedient in my own calculations of the wealth of the United Kingdom to include the foreign investments of the members of the community at home as far as possible, and similarly I would make a deduction in the case of an indebted community equal to the amount of its indebtedness. All this, however, would be on the assumption of a continuation of peace, and subject to the qualification that in certain circumstances a different calculation would practically require to be made.

There is one point in addition to be noticed in regard to the method of these calculations. Where property in two countries appears to be subject to a tax like probate duty or income tax on apparently much the same basis, the temptation is very strong to apply the calculated amount of such property per head to each nation respectively, but nothing could be more dangerous owing to the difficulty of the data. The laws and their administration in the respective countries compared would need careful examination before any such short cut could be used, and even then one ought not to be too sure of any single method. Unless some detail could be given, no such method should be employed except as a check on a more detailed method. Such a method is also specially dangerous when the wealth of a community is arrived at without any items being given; by such a method, for instance, as that of dividing the average wealth subject to probate duty in a year by the numbers dying in a year, assuming the wealth per head thus arrived at to be the average wealth per head of the community, and then multiplying the numbers of the community by that figure so as to arrive at the aggregate wealth. The method may yield useful results if care be taken to establish *aliunde* what is the relation between the wealth per head of those members of a community who die within a year, and the wealth per head of the members of a community as a whole, but when no such care is taken, and communities are compared whose probate and income-tax laws are not really the same, the result of the comparisons may be the merest chance.

Conclusion.

The conclusion of this long review may be very shortly stated. All the leading branches of statistics without exception, when examined, give numerous illustrations of the dangers of taking the figures relating to them from dictionaries or works of reference at haphazard for international comparison, as if the figures called by the same names in different countries meant the same things, or the units had the same values. On the contrary, from the simplest figures as to population and area, through the more complex figures as to the moral qualities of communities indicated by statistics like those relating to education and crime, down to the still more complex figures relating to production, trade and wealth, the same tale is told as to the necessity for constant watchfulness lest things that are really unlike be put together as if they were like. The moral is what was stated at the outset, that the figures as such may be right enough, though there are many difficulties as to the data themselves to be faced in statistics, but the exact meaning of the figures called by the same name, when place and circumstances are different, may require a great deal of elucidation. Perhaps some may think that the difficulties are so great as to make it hopeless to handle most statistics in such a way as to reach any conclusion. This is, however, by no means the case. When care is taken true conclusions begin to appear, and a picture is obtained of the general conditions of communities in the mass which would otherwise be unattainable. The negative results which are the effect of the criticism applied to the rough and ready methods of amateur statisticians are also valuable and important. There are so many errors about respecting the condition of most communities, partly derived from, and partly nursed by, the rash use of statistics with a more or less conscious bias towards a desired conclusion, that it clears the air to have a demonstration of the impossibility of these errors being proved to be true. When one nows, for instance, how intrinsically difficult it is to rove statistically the greater prosperity of one country han another when the differences between them are not ery great, it is not difficult to estimate at its due veight any argument in which the difficulties are ignored nd statistics are dealt with by short cuts when they eem to support the side on which the arguer has ranged imself. If we help by this discussion to strengthen the vholesome attitude of doubt, and to discredit the short uts of the amateur partisan, the discussion, it may be oped, will not have been wholly in vain.

ABLE A.—*Total Population, and Total Male Population above age of twenty, in the Undermentioned Countries (according to the latest information available).*

	France. (Census, 1886.)	Germany. (Census, 1885.)	United Kingdom. (Census, 1881.)
otal Population . .	37,930,759	40,855,704	34,884,848
otal Male Population	18,900,312	22,933,664	16,972,654
otal Male Population above age twenty .	11,828,363	12,435,796	8,898,529
otal Male Population between twenty and forty	5,376,254	6,577,383	4,838,585

TABLE B.—*Statement showing the value of Imports and Exports into and from each of the Australasian Colonies during the year* 1889 *from and into* (1) *the remaining Australasian Colonies and* (2) *all other Countries.*

Colonies.	Imports.		
	From Australasian Colonies.	From other Countries.	Total.
	£	£	£
New South Wales . .	10,647,312	12,215,745	22,863,057
Victoria	8,539,854	15,862,906	24,402,760
South Australia . . .	4,045,691	2,758,760	6,804,451
Port Darwin, N.T. . .	132,054	62,290	194,344
Western Australia . .	334,969	483,158	818,127
Tasmania.	1,037,078	573,957	1,611,035
New Zealand . . .	1,107,132	5,189,965	6,297,097
Queensland	2,717,671	3,334,891	6,052,562
Total	28,561,761	40,481,672	69,043,433

Colonies.	Exports.		
	To Australasian Colonies.	To other Countries.	Total.
	£	£	£
New South Wales . .	10,741,045	12,553,889	23,294,934
Victoria	4,022,054	8,712,680	12,734,734
South Australia . . .	3,283,734	3,975,631	7,259,365
Port Darwin, N.T.. .	87,836	32,380	120,216
Western Australia . .	147,557	613,835	761,392
Tasmania.	1,208,006	251,851	1,459,857
New Zealand . . .	2,145,671	7,193,594	9,339,265
Queensland	5,167,790	2,568,519	7,736,309
Total	26,803,693	35,902,379	62,706,072

XV.

THE GROSS AND THE NET GAIN OF RISING WAGES.[1]

IN the discussions to which former papers of mine on working-class progress have given rise, there are some criticisms which have interested me very much. They are made by members of the working class themselves, who are slow enough to admit the average increase of their money earnings in the last fifty years, which the figures demonstrate. But, admitting some increase of money, they go on to say, and admitting, too, the low prices, the improvement after all is not without drawbacks, or, as I have suggested in the above title, it is mainly in the gross. There are drawbacks which take away much of the apparent advantage. A general statement like this, apart from particular allegations to support it, could not but excite my attention, although I have avoided hitherto any discussion of it. It is a good rule to do one thing at a time. An improvement of money earnings and no increase of prices appeared to be two points worth establishing, whatever the drawbacks of a less apparent kind, and which the working classes could themselves best appreciate, might be. But while avoiding the discussion hitherto, I have been none the less observant, for the simple reason that each class knows its own grievances as no others can, and that such complaints, though easy enough to prove unfounded, are apt to cover facts which will reward investigation—which will throw light, when properly understood, not only on the particular problems in hand, but on larger problems. I propose in the present paper to communicate some reflections which I have made. The alleged drawbacks, when considered, do, in fact, suggest for consideration questions of a weighty nature, which go to the root of ideas of progress, and affect the most general views of the prospects of modern civilization.

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[1] From the "Contemporary Review" of 1889.

The alleged drawbacks of which I speak are mainly the following: First, it is said, working men in many cases have more to pay for rent than they would have to pay when earning less money under different conditions, or they have to pay railway or 'bus fares or similar charges for conveyance to and from their work, which are in the nature of an increase of rent. Consequently, although the money wage is more, the workman is not so much better off than he was, because a large part of that money wage has to be paid as a fine, practically, to enable the working man to be in a position to earn it. In other words, the gross sum is more, but the net sum is not so much more. It is easy to perceive also that this principle may have a much wider application than may at first be surmised. The case usually thought of is that of rent, or an equivalent fine on a workman, which he pays in order to be in a certain place where the money wage can be earned. Suppose the climate in which he has to live in order to earn a larger money wage than he can get elsewhere is so exhausting as to compel a larger consumption of food in order that the money may be earned? The question of gross and net is thus of a wide-sweeping kind.

Next, it is maintained that along with a great increase in production which has undoubtedly taken place, there has come an increase in the severity of the labour, and that the workman's remuneration has not risen in proportion. It seems to be suggested at times that the increase in the labour is itself an evil, even if it were proportionately remunerated, but the complaint rather is that the severer toil is not adequately compensated: the workman has a severer call made on his energies, and he is not so much better off. To be able to earn more money, it is sometimes urged, he must, in fact, spend more money on food and other things than he formerly did. Here, again, is a question of gross and net, and it will be observed how the last complaint raises in a different form the question already suggested under the first head by a consideration of the effects of climate. A distinction is made between the gross earning and the net surplus, the difference being something which the working man has to pay as a fine to enable him to earn the net sum which he wishes to spend.

Last of all, it is maintained that on all sides the scale of living has become more expensive. The working man has to get more food, clothing, and shelter for his family than he would formerly have had to get; more is expected of him; and he has to pay for such things as the education of his children to a much greater extent than he would formerly have had to pay. In this way the strain upon the working man has increased. As I understand the complaint, he is no more a free man than before. His energies are mortgaged in advance, and he has all the old difficulty to keep his footing in the world.

Now, whether these complaints are right or wrong, well or ill founded, it is clear that they involve problems of a most vital kind as to the general effect upon the working classes of the conditions of modern civilization. To take the first head of complaint. If it be the case that a rise of rent or the charge for travelling between the place of living and the place of work or similar expenditure is sufficient to deprive working men of the advantage of increased money wages, then the congregation of men in cities or in certain parts of cities, where higher money wages are to be obtained than elsewhere, which appear to be the conditions of modern industrial life, would be fatal to improvement. It would be the same with the necessity for working in an exhausting climate. The problem, as stated, is certainly of the gravest kind. The questions raised by the second head of complaint are just as important. If increase of toil, not proportionately remunerated—for which, perhaps, there can be no proportionate remuneration—comes with the increase of productive capacity and the greater call thus made on the nervous and mental energy of the workman, what is the working man the better off for all the civilization? Finally, as regards the increased cost of living through a rise in the scale, may it not be the case that such a rise in the scale of living is to some extent what is meant by progress, though the drawback of the slavery of the workers, which some working men appear to feel so keenly, remains? How far is the "slavery" itself avoidable, so long as human nature is what it is, unless at the risk of all civilization perishing? Such problems are obviously of the deepest interest. The desire for leisure, for an ease to a severe strain, in all these complaints, is itself very striking, and may, perhaps, be held of itself to indicate a change of working-class conditions, as compared with a time when the masses simply endured, or were content to drag on a dull existence, with little colour in it, and without hope of change. The whole subject, at any rate, should be well worth considering. What are the facts, and what should be the conclusions regarding them?

Dealing with the first head of complaint, which is perhaps the simplest and most easily dealt with, we must allow it to be obvious on the surface that there is a real point for discussion. Under the essential conditions of modern life, principally the concentration of huge masses on narrow room, competition among labourers undoubtedly produces monopoly rent, the payment of which is a simple deduction from the gross money wages which workmen receive. If workmen, to avoid paying more than they can help, live at a distance from their work, they only escape the evil partially, because charges for conveyance to and from their work have to be paid. Clearly workmen under such conditions, as compared with conditions under which no monopoly rent or its equivalent has to be paid, are at a disadvantage. To show their real position for the purpose of comparison, the monopoly portion of the rent must be deducted. It is quite obvious, also, on the merest superficial aspect of the question, that as regards many workmen, at least, the disadvantage may easily be so serious as to compensate, and more than compensate all the difference between the money wage of the country, where there is no monopoly rent, and the money wage of the town. Take the case of a west Highland peasant fifty years ago, living on a scanty wage of a few shillings a week, or the produce of a poor croft eked out by kelp-gathering or fishing, and his descendant at the present time in the slums of a great city, earning perhaps 15*s.* a week, but disbursing 4*s.* or 5*s.* for rent. The improvement in money earnings may be immense, perhaps 100 per cent., and as regards prices of commodities there may be no drawback in the change, but the rent takes a monstrous cantle out of the margin. Comparing all the conditions, it may certainly be doubted whether the peasant, in the case supposed, in exchanging the hard life of the country, which still had the advantage of being in the open, for the hard life of the city, has made any real advance. Take a case higher in the scale. A doctor, to earn a living, resides in a city rather than in the country, pays a huge monopoly rent to begin with, and incurs many other analogous expenses, so that altogether he has a large leeway to make up before he can reckon that net income which can properly enter into comparison with that of his country colleague. The difference may easily be so great, I believe, that in many cases a professional man in a small country town with £300 or £400 a year may have a larger net income for the real objects of life, dealing with the question in a wise philosophic spirit, than a professional man in London with £1,000 or £1,200 a year. There are differences even between London and smaller provincial cities. Thus the question between gross and net, which working men have raised in these discussions, apropos of monopoly rent or the equivalent, is a real question. It is a new form of the old theorem, that people may buy gold too dear.

I have already, in part, dealt with the question practically as far as working men are concerned, by pointing out the really narrow limits of monopoly rent,[1] and practically the final conclusion must be reached by the statistical method, and in the way I have already used. But I wish to avoid statistics for the present, and to indicate merely the general conditions of the problem to be solved, which appear to minimize the possible extent of the alleged drawback.

It is clear, first of all, on general grounds that the concentration of men in cities is due to the fact that cities, on the whole, weigh in the balance against the country. There is more and better employment there than in the country, all deductions made, in the opinion of those interested, and that seems a conclusive answer to the question as to whether, on the whole, there is not a net as well as a gross improvement in wages as far as this drawback is concerned.

Next, it is plain that as a great part of the improvement of the last fifty years has consisted in the substitution of artisan and other highly-paid labour for merely rude labour, the additional monopoly rent payable in the cities can only be, in most cases, a comparatively trifling drawback. It may be the case, that if we compare the former peasant of the country with the rude labourer of the city, and especially of the Metropolis, the latter has hardly gained; but if we compare the former peasant of the country with the town artisan of the present time, although the latter has to pay monopoly rent or an equivalent charge for conveyance, there is still an enormous gain in the latter's position. It is the same with the professional classes. If the latter were stationary in number, or increasing only *pari passu* with the increase of population, then the larger gross income on the average earned by the masses of professional men in cities, as compared with the professional incomes earned in the country formerly, might show little *net* improvement; but allowance has to be made for the fact that the number of such incomes has enormously increased, and that the earners largely compare with the earners of wholly inferior incomes in former times, whether in town or country. As the increase of these classes could not have taken place without the growth of cities, there must be a large net as well as gross gain to be reckoned when the comparison is properly made.

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[1] See *supra*, vol. i., pp. 397-398.

To bring the matter to a point, what I have to urge is, that the very growth of cities implies the existence of conditions under which workmen of higher grades take the place of workmen of lower grades, so that, although class for class a workman passing from country to town does not seem to gain so very much, on account of the difference between gross and net, yet, man for man, on the average there is an enormous gain. Illusion is produced because the proper terms of the comparison are lost sight of. The point is especially important, as regards what is known as the residuum. Nothing can appear so deplorable or so hopeless as the conditions of the floating mass of rude labour in large cities. Monopoly rents in this case appear to sweep away all possible advantage which may result from higher money wage, comparing the labourer of the town with the labourer of the country. In many cases, even, it must be admitted, the "residuary" of the city is on a lower level than the "residuary" of the country. His "net" earnings are less. But the question, after all, is one of proportion. The absolute magnitude of the city residuum must not blind us to the fact that it may be, not an increasing, but a diminishing, element with reference to the population generally. I believe it is a diminishing element, but this would hardly be the place to discuss the point, and I am content for the present to call attention to its importance in the discussion.

The assumption so often made, that the residuum is increasing relatively, is one which requires proof, and I have never seen any attempt at proof, while there are some broad facts, such as the diminution of serious crime and of pauperism, against it.

The question of the way in which the net value of an increase of money wages may be affected by the necessity of living in a more exhausting, or in some way more expensive, climate, or by the specially exhausting character of a highly paid occupation, such as puddling, is one of the same kind. There is clearly a point in the matter for consideration and discussion. I am disposed to believe, for instance, that the exhausting climate of the United States, compelling the consumption of more food to enable the same work to be done, is a distinct drawback to the American working man as compared with his competitor in Western Europe, and especially in Great Britain. I am not sure but that living in the South of England, owing to climate, is more expensive than in the North and in Scotland. The point has hardly been expressly considered, the working man practically having been right to go where he gets the highest money wage, but it is one that may become of increasing practical interest now that charges for conveyance are so low throughout the world as to make it quite unnecessary for men to live near the places where their food and raw materials are produced. I shall be well content for the present if the remarks here made induce some working men to elaborate it from their practical experiences. Of course, in any discussion it would also have to be considered that the greater expense of living may not be a pure drawback. The ability to consume and produce more, to bear exhausting climate or occupation, in fact, may be a good thing, and bring its own compensation, although the net gain, taking matters strictly, may hardly be appreciable.

The next head of complaint is the increase in the severity of labour and the want of any proportionate remuneration.

On this head it may be admitted, to begin with, that there is apparent foundation for some of the complaints. Workmen in particular employments do not get a reward at all in proportion to the increase of production in those employments. The illustration of a cotton mill is familiar. A single attendant on a number of machines will "produce" as much in an hour as formerly in a year or two, but his wages are only double—or perhaps not quite double—what they were when the production was so much less. A great steamship supplies another illustration. The ship does many times the work which could have been performed by the sailing ship it has displaced, and with much fewer men in proportion to the tonnage conveyed. But the wages of the average member of the crew are again only double, or not quite double, what they were when the conveyance done was so much less. In these and similar cases, who gets the benefit of all the increase of production? The workmen in the particular employments concerned receiving only a fraction of the gain may be excused for suspecting that there is something inexplicable in those social and economic arrangements by which the benefit is spirited away from them.

But, however natural the question, it is not difficult to point out that there is a good reason why workmen in some given employments should only receive a fraction of the benefit from the increased productiveness of those employments, and that this fact is quite consistent with an improvement in the position of workmen all round in proportion to the generally increased productiveness of labour, which is the real question we are now investigating, for the purpose of comparing this increase of productiveness with the increase of the severity of labour throughout society. The short explanation is that the employments in which there is a great increase of production, being mainly the employments in which there are great mechanical improvements from time to

time, constitute only a part of the whole employment for labour, and that by a natural law labour in each employment finds its level, the increase of the return arising from an invention in a particular employment resulting in a gain, not to the particular labourers concerned, but to the whole community of labourers. That the gain may be general, it is, in fact, essential that labourers generally should gain as consumers rather than as producers, which implies that in a given employment wages should increase, not in proportion to the increased productiveness of that employment by itself, but in proportion to the increased productiveness of labour generally. Hence, it may well be that while the productive power of machines may enormously increase, yet the general increase of productive power may be much less than would at first be thought, owing to the comparatively small proportion of labourers after all who use machinery of great capacity largely in their employments. Looking at the number of domestic servants, of clerks, of professional men and women, of unskilled labourers of every kind, of skilled labourers, such as painters, who do not use machines, I should doubt very much whether one-fourth of the labourers, even in a society like that of England, the most manufacturing in the world, use machinery of great capacity in their employments. It is easily to be accounted for, therefore, why in a given employment there should be a great increase of production without a corresponding increase of remuneration to those engaged in that particular employment. The gain has to be diffused through society, and the increase of production generally is not so great, and not nearly so great, as in a few special cases.

Another observation must be made. There may be a considerable improvement in the quality of production in employments of a non-mechanical kind, which it is difficult or even impossible to note by quantities, but where the labour competes with all other labour for remuneration. Where the increased remuneration should

go to, when machines improve, is thus not so easy to determine *à priori*.

It is also obvious that even in an advancing community the remuneration of certain kinds of labourers, whose numbers continue disproportionate, may either not increase at all, or increase very little, the whole gain from increased productiveness being for the benefit of the labourers whose own labour improves in quality, apart from the fact that it is employed on more productive machines. Strictly speaking, unless there is a rise in the scale of living, accompanied by an improvement in quality all round, there is no reason why, in modern times, a man who can only drive a spade into the ground, or wheel a barrow, or carry bricks up a ladder, should receive any higher reward than similar labourers in former ages. The fact that such labourers are little better off is not inconsistent with the fact that workmen generally receive a larger reward than in any former period.

The way is thus cleared for answering the question as to whether the remuneration of labour has increased generally in proportion to the increased severity of labour.

It cannot be denied, first of all, that there is a great increase of the productiveness of labour itself, as well as a great increase of the absolute amount of remuneration. This is admitted on all sides. The increase of production is the very fact which is assumed. Nor is the increase of remuneration denied—the only question is of the proportionate remuneration. Before passing from this point, however, I should like to dwell a little on the fact already referred to, of an improvement in the quality of non-mechanical labour, because, as this labour is largely the subject of direct exchange without much intervention of capital, the mere fact of improvement implies almost a proportionate increase of remuneration. At any rate, the labourers concerned get almost the whole benefit, because they exchange with each other. I refer to such employments as those of teaching, medical attendance, nursing, domestic service,

time, constitute only a part of the whole employment for labour, and that by a natural law labour in each employment finds its level, the increase of the return arising from an invention in a particular employment resulting in a gain, not to the particular labourers concerned, but to the whole community of labourers. That the gain may be general, it is, in fact, essential that labourers generally should gain as consumers rather than as producers, which implies that in a given employment wages should increase, not in proportion to the increased productiveness of that employment by itself, but in proportion to the increased productiveness of labour generally. Hence, it may well be that while the productive power of machines may enormously increase, yet the general increase of productive power may be much less than would at first be thought, owing to the comparatively small proportion of labourers after all who use machinery of great capacity largely in their employments. Looking at the number of domestic servants, of clerks, of professional men and women, of unskilled labourers of every kind, of skilled labourers, such as painters, who do not use machines, I should doubt very much whether one-fourth of the labourers, even in a society like that of England, the most manufacturing in the world, use machinery of great capacity in their employments. It is easily to be accounted for, therefore, why in a given employment there should be a great increase of production without a corresponding increase of remuneration to those engaged in that particular employment. The gain has to be diffused through society, and the increase of production generally is not so great, and not nearly so great, as in a few special cases.

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ing of machines, the very employments where there is apparently the greatest increase of production and the least proportionate increase of the remuneration of labour. The strain upon the nervous system, through the combined monotony of the employment and the constant vigilance required, are no doubt very often most severe, and are perhaps felt the more because the present generation is comparatively untrained. But the increased severity of toil, without proportionate remuneration, might be admitted in those special employments without altering the fact that remuneration has increased generally. What seems to have happened in these cases is, that the development of society imposes a heavy burden on a special class, involving rapid change in the quality of its labour, to which it is hardly equal, but that the improvement in quality is part of the general improvement in society. The nervous power to stand monotony and supply the necessary vigilance and other moral qualities necessary for the supervision of machines may exist in greater abundance in the next generation, along with a continued improvement in the quality of labour in non-mechanical employments.

It will, perhaps, be urged that the workman does not get a proportionate remuneration because the capitalist obtains for himself the increased product—the socialist argument. But the facts are all against this explanation. One of the most remarkable facts of recent years is the general decline in the return to capital. Capitalists from year to year have been willing to invest for a smaller and smaller return. We must assume, then, that if they have gained at all it has only been by the immense cheapening of commodities, and labour has gained more than in proportion. This would appear to be the case: only the labourers who have gained, as we have seen, are not specially those who are occupied about machines. The gain is generally diffused, and is received by labourers generally in proportion to the relative values of their work. Apparently the greatest gain has been among the higher artisan

time, constitute only a part of the whole employment for labour, and that by a natural law labour in each employment finds its level, the increase of the return arising from an invention in a particular employment resulting in a gain, not to the particular labourers concerned, but to the whole community of labourers. That the gain may be general, it is, in fact, essential that labourers generally should gain as consumers rather than as producers, which implies that in a given employment wages should increase, not in proportion to the increased productiveness of that employment by itself, but in proportion to the increased productiveness of labour generally. Hence, it may well be that while the productive power of machines may enormously increase, yet the general increase of productive power may be much less than would at first be thought, owing to the comparatively small proportion of labourers after all who use machinery of great capacity largely in their employments. Looking at the number of domestic servants, of clerks, of professional men and women, of unskilled labourers of every kind, of skilled labourers, such as painters, who do not use machines, I should doubt very much whether one-fourth of the labourers, even in a society like that of England, the most manufacturing in the world, use machinery of great capacity in their employments. It is easily to be accounted for, therefore, why in a given employment there should be a great increase of production without a corresponding increase of remuneration to those engaged in that particular employment. The gain has to be diffused through society, and the increase of production generally is not so great, and not nearly so great, as in a few special cases.

Another observation must be made. There may be a considerable improvement in the quality of production in employments of a non-mechanical kind, which it is difficult or even impossible to note by quantities, but where the labour competes with all other labour for remuneration. Where the increased remuneration should

the remuneration cannot be reduced. And that this is really the case in many employments may be easily enough illustrated. It is quite certain that the driver of an express engine could not go through the very formidable labours he undergoes if he only had the food of the rude labourer of a former time, and only lived in the way that such a labourer used to live. He would not, under such conditions, have the energy or brain power for the work to be done. It is the same with workmen in a factory who have to attend to many machines. The constant strain simply could not be endured if the workman had to live as the factory worker of a former time had to live. The present worker is really cheaper than the former worker, because he does more in proportion; but dear as he is, yet, in another respect, he may perhaps be viewed, according to a suggestion already made, as really engaged at a minimum wage—without which he could not do the work at all. This is not a question merely of a rise in the scale of living, though that question is intermixed with it. It is a question of the actual necessity on the part of the workman that certain things should be put into him, or supplied to him, as a condition of his doing the work which he actually performs. What is true of the workman specially referred to is of course still more true of the higher kinds of work involving artistic or other skill.

It may also be added, that the suggestion already made as to the reason for the non-increase of remuneration in certain directions being that the work done has not itself improved in quality, is fully confirmed by the general view thus stated. If the work which has improved in quality is itself only so remunerated as to make it doubtful whether the remuneration is adequate, whether the game is worth the candle, and is, in fact, at the point of minimum, so as to enable the work to be done at all, out of what fund is the remuneration of the work that has not improved in quality to come? In the midst of plenty, apparently, such workmen, by comparison, must starve, because, notwithstanding all the plenty, those who really do the hard work of modern society are only just paid, and no more. It is easy for such workmen and their so-called friends to point to the capitalists as living on *their* labour; and no doubt if it were possible to divide the earnings of capitalists amongst society generally, according to numbers, these particular workmen might be much better off. But it is not from the labour of such workmen that capitalists mainly derive their income, while those who do work, as we have seen, have so large a remuneration that they can have no quarrel with the capitalist. The suggested division would therefore only be for the benefit of a special class whose existence is itself a danger to society, and which should rather be discouraged than encouraged, the whole efforts of society being rather directed to their transformation by education and similar agencies into a higher class, than to securing an increased payment for their work under present conditions. The curse of the very poor, in more senses than one, is their poverty—poverty in strength, in mental capacity, in moral qualities. They are poor because they cannot earn more. If they were stronger they would have the earnings, and would have no quarrel with the capitalists. To improve their condition they must be made stronger, and not merely given more to spend, which would be a curse to them instead of a blessing, as it is to the merely idle capitalist whose luxury they envy, whose existence is a danger to society also, and whose obliteration, or rather transformation into a different class, is equally to be sought for.

The next head of complaint is that a workman has more expenses now, in consequence of the rise in the scale of living. Not only himself, but his family, must live better. They must have better and more food, be better clothed and sheltered, be better educated, and so on. The workman himself, on whom the burden falls, has no more surplus than before. He is not a freer man.

This head of complaint, however, demands very little remark. The statement of complaint is, in truth, one of the best evidences of progress. Of course there has been a rise in the scale of living. Such a rise was quite certain to come with an improvement in the earnings of workmen. The fact that it has come, is itself one of the proofs of improvement. No doubt there is a continued absence of a free surplus. I suspect, however, that at no time have many people, in this country at least, had philosophy enough to be thrifty and careful, and to do without some things that appear to be necessary for their sphere in life, so as to have what is meant by a surplus. Its absence is certainly no proof that the condition of those who make the complaint has not improved. The scale of living has risen, and this rise, beyond all question, imposes a strain upon many workmen which only the greatest care and philosophy can mitigate. It involves of necessity severer toil on the part of the bread-winner, with no apparent surplus for himself.

It is apparent, however, that to some extent what is called a rise in the scale of living is, in reality, an improvement in the mode of living, which is absolutely necessitated by the work itself, without which, in fact, the work could not be done. Where moral qualities are to be displayed, and great vigour, punctuality, and energy are required, they are not to be expected except from workmen of a certain class, whose scale of living has, in fact, risen to the standard necessary, and whose "medium" and "atmosphere," of which the condition of wife and children or relations is a part, is altogether different from what it was. Before human beings can display the qualities and exert the energies required, they must have certain tastes and wants to gratify, or there would be no motive to exhibit those qualities and energies. Hence a rise in the scale of living is only another mode of describing the improvement in the character of the workman, which is essential to the performance of the work to be done.

The conclusions of this long argument may now be very shortly restated. In certain cases the increase of net earnings by the advance of the last fifty years cannot be so great as the increase of gross earnings, because some classes of workmen have to submit to an increased charge for rent and railway fares, and similar expenditure, which really amount to a reduction from *the gross earnings which they receive.* But on the *whole, the classes of workmen affected in this way must, from the nature of things, be comparatively small, while* the general conditions are such that the deduction from gross earnings, as a rule, still leaves an enormous net gain. Next, the allegation as to the increased severity of labour, and as to workmen not getting a sufficiently adequate remuneration or a sufficient share of the increased gross produce, is met by the admission generally of an increase in the severity of labour, which, however, is found to be more properly described as a revolution in the quality of the labour, and to be connected with the fact of improvement generally, and to be evidence of improvement in the workman's condition. The character of labour generally has so changed that it cannot really be measured in comparison with the labour of a former time. Some workmen engaged about machines may appear to get comparatively little of the increased production for themselves, but the reason is that the improvement in machines is for the benefit of society as a whole, and not specially for that of the particular workmen engaged upon them, who only participate in the improvement as consumers, and not as producers. Substantially, however, there is more severe toil all round, and whether the additional remuneration is adequate or not, the change in the quality of the labour is necessary to the production, the labourer gets all the possible remuneration, and the labour itself could not be carried on without the remuneration obtained. It is the same with the complaint as to the rise in the scale of living. The rise in the scale is at once a proof of the improvement in the workman's condition, and of the necessity for an improvement in his living to enable him to do the new work. The two things are inextricably connected. On the whole, the complaint of workmen as to the difference between gross and net is not unjustified, but it points to changes in their condition of a remarkable kind, which are in every way deserving of farther study. To show fully what these changes are, statistics would be needed, but the necessary conditions of the problem are apparent without statistics. The complaints here dealt with could not exist without that improvement in society and the condition of the masses which the complaints seem to call in question.

A further conclusion may be drawn. The conditions of life thus indicated seem favourable, on the whole, to a continuous improvement in society, so long as science and art make progress, and heavier and heavier calls are made on the intelligence and energy of workmen, along with an increase of their capacities on the one side and their wants on the other. The whole structure of modern society is such as to require greater and greater knowledge, greater and greater energy and moral power, greater and greater capacity of every kind, so as to make sure that machines and inventions are maintained and improved, and that artistic capacities and the arts of living are developed to correspond. The continuous improvement implies a continuous improvement, on the average, of the human being who really belongs to the new society. So long as society, therefore, continues to progress—that is, for our present purpose, so long as the average workman continues to produce more quantity or better quality—there must be continuous improvement and progress in the quality of workmen themselves, and the conditions of their existence, although we should not expect that complaints would cease as to the greater severity of toil and as to particular classes of workmen not getting for themselves the full benefit of the increased production. Still, the improvement is there, and the complaints, when analyzed, are, in truth, signs of the improvement.

The one doubtful sign, it appears to me, as regards the future, is pointed at by the qualification implied in the words—the human being *who really belongs to the new society*. It may possibly happen that there will be an increase, or at least non-diminution, of what may be called the social wreckage. A class may continue to exist and even increase in the midst of our civilization, possibly not a large class in proportion, but still a considerable class, who are out of the improvement altogether, who are capable of nothing but the rudest labour, and who have neither the moral nor the mental qualities fitted for the strain of the work of modern society. On the other side, as already hinted, the existence of what may be called a barbarian class among the capitalist classes, living in idle luxury, and not bearing the burden of society in any way, seems also a danger. But speculations of this sort would perhaps take us too far at present. Substantially, as yet there seems to be no reason to doubt the steadiness of the improvement in recent years among the working classes, both those practically so called and those who may be included when we use the language in its widest—that is, the strictly economic—sense, and that this improvement goes on from year to year, and from generation to generation, and must, in the nature of things, go on, in consequence of the improvements and inventions of the modern world, and the general spread of education, so long as nothing happens to prevent a continuous improvement in the efficiency of human labour and the average return it can obtain from the forces with which it works.

XVI.

THE RECENT RATE OF MATERIAL PROGRESS IN ENGLAND.[1]

IN coming before you on this occasion it has occurred to me that a suitable topic in the commercial capital of England, and at a time when there are many reasons for looking around us and taking stock of what is going on in the industrial world, will be whether there has been in recent years a change in the rate of material progress in the country as compared with the period just before. Some such question is constantly being put by individuals with regard to their own business. It is often put in political discussions as regards the country generally, with some vague idea among politicians that prosperity and adversity, good harvests and bad, in the most general sense, depend on politics. And it must always be of perennial interest. Of late years it has become specially interesting, and it still is so, because many contend that not only are we not progressing, but that we are absolutely going back in the world, while there are evident signs that it is not so easy to read in the usual statistics the evidence of undoubted growth as it was just before 1870-73. The general idea, in my mind, I have to add, is not quite new. I gave a hint of it in Staffordshire last winter, and privately I have done something to propagate it so as to lead people to think on what is really a most important subject. What I propose now to do is to discuss the topic formally and fully, and claim the widest attention for it that I possibly can.

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[1] Address as President of Section F at British Association meeting, Manchester, 1887.

I.

There is much *primâ facie* evidence, then, to begin with, that the rate of the accumulation of wealth and the rate of increase of material prosperity may not have been so great of late years, say during the last ten years, as in the twenty or thirty years just before that. Our fair-trade friends have all along made a tactical mistake in their arguments. What they have attempted to prove, is that England lately has not been prosperous at all, that we have been going backwards instead of advancing, and so on; statements which the simplest appeal to statistics was sufficient to disprove. But if they had been more moderate in their contentions, and limited themselves to showing that the rate of advance, though there was still advance, was different from and less than what it was, I for one should have been prepared to admit that there was a good deal of statistical evidence which seemed to point to that conclusion; as soon as a sufficient interval had elapsed to show that the statistics themselves could not be misinterpreted. There has now been ample time to allow for minor variations and fluctuations, and the statistics can be fairly construed.

I have to begin by introducing a short table dealing with some of the principal statistical facts which are usually appealed to as signs of general progress and the reverse, and I propose to go over briefly the items in that table, and to discuss along with them a few broad and notorious facts which cannot conveniently be put in the same form. (See p. 101.)

The first figures are those of the income tax assessments. What we find is that if we go back thirty years and compare the amount of income tax assessments in the United Kingdom at ten years' intervals, there appears to be an immense progress from 1855 to 1875, *Statement as to production or consumption of staple articles in the United Kingdom in the undermentioned years, with the rate of increase in different periods compared.*

	1855.	1865.	1875.	1885.	Ratio of Increase per cent.		
					1855-65.	1865-75.	1875-85.
Income Tax assessments, million £ .	308	396	571	631	28	44	10
Production of coal, million tons . .	64	98	132	159	53	35	20
„ pig iron „ . .	3.2	4.8	6.4	7.4	50	33	16
Receipts from railway: goods traffic per head of population	—	11*s.*[1]	18*s.*[1]	21*s.* 2*d.*[1]	—	63	18
Clearances of shipping in foreign trade, million tons	10	15	24	32	50	60	33
Consumption of tea per head, lbs. . .	2.3	3.3	4.4	5.0	43	33	13½
„ „ sugar „ „ . .	30.6	39.8	62.7	74.3	30	58	19

[1] These figures are for 1860-64, 1870-74, and 1880-84.

the first twenty years, and since 1875 a much less progress. The total amount of the assessments themselves, stated in millions, was as follows:

	Millions.		Millions.
1855	£308	1875	£571
1865	396	1885	631

and the rate of growth in the ten yearly periods which these figures show is—between 1855 and 1865, 28 per cent.; between 1865 and 1875, 44 per cent.; and between 1875 and 1885, 10 per cent. only.

Making all allowance for changes in the mode of assessment by which the lower limit of the tax has been raised, for the apparent increase before 1875 which may have been due to a gradual increase of the severity of the collection, and for the like disturbing influences, I believe there is no doubt that these income tax assessments correspond fairly well to the change in the money value of income and property in the interval. How great the change in the rate of increase is, is shown by the simple consideration that if the rate of increase in the last ten years, instead of being 10 per cent. only, had been 44 per cent., as in the ten years just before, the total of the income tax assessments in 1885, which is actually 631 millions, would have been 882 millions! Something then has clearly happened in the interval to change the rate of increase.

These figures being those of money values, an obvious explanation is suggested which would account in great part for the phenomenon of a diminished rate of increase in such values without supposing a reduction of the rate of increase of real wealth, of the things represented by the money values, to correspond. This is the fall of prices of which we have heard so much of late years, and about which in some form or another we shall no doubt hear something at our present meeting. It is quite clear that if prices fall then income tax assessments must also be affected. The produce of a given area of land, for instance, sells for less than it would otherwise sell; there is less gross produce, and in proportion there is even less net produce, that is, less rent; consequently the net income appearing in the Income Tax Schedules is either less than it was or does not increase as it did before. The same with mines, with railways, and with all sorts of business under Schedule D. The things themselves may increase as they did before, but as the money values do not increase but diminish, the income tax assessments cannot swell at the former rate. It is the same with salaries and other incomes not dependent so directly in appearance on the fall in prices. Salaries and incomes are of course related to a given range of prices of commodities, and a fall in the prices of commodities implies that the range of salaries and incomes is itself lower than it would otherwise be, assuming the real relation between the commodities and incomes to be the same after the fall in prices as it would have been if there had been no fall in prices. Hence the income tax assessments by themselves are not a perfectly good test in a question like the present. The change implied may be nominal only, so far as the aggregate wealth and prosperity of the community are concerned, though of course there can be no great and general fall of prices without a considerable redistribution of wealth which must have many important consequences.

This criticism, however, does not apply to the remaining figures in the short table submitted, and to various other well-known facts, which we shall now proceed to discuss.

The production of coal, then, is found to have progressed in the last thirty years as the income tax assessments have done. The figures in millions of tons at ten years' intervals are as follows:

	Million Tons.		Million Tons.
1855	64	1875	132
1865	98	1885	159

And the rate of growth in the ten yearly periods which these figures show is between 1855 and 1865, 53 per cent.; between 1865 and 1875, 35 per cent.; and between 1875 and 1885, 20 per cent. only. The rate of growth in the last ten years is much less than in the twenty years just before. The percentages here, it will be observed, are higher than in the case of the income tax assessments. The increase in the last ten years in particular is 20 per cent. as compared with an increase of 10 per cent. only in the income tax assessments. But the direction of the movement is in both cases the same.

I need hardly say, moreover, that coal production has usually been considered a good test of general prosperity. Coal is specially an instrumental article, the fuel of the machines by which our production is carried on. Whatever the explanation may be, we have now, therefore, to take account of the fact that the rate of increase of the production of coal has been less in the last ten years than in the twenty years just before.

Then with regard to pig-iron, which is also an instrumental article, the raw material of that iron which goes to the making of the machines of industry, the table shows the following particulars of production:

	Million Tons.		Million Tons.
1855	3.2	1875	6.4
1865	4.8	1885	7.4

And the rate of growth which these figures show is between 1855 and 1865, 50 per cent.; between 1865 and 1875, 33 per cent.; and between 1875 and 1885, 16 per cent. only. Whatever the explanation may be, we have thus to take account of a diminution of the rate of increase in the production of pig-iron, much resembling the diminution in the rate of increase of the production of coal.

At the same time the miscellaneous mineral production of the United Kingdom has mostly diminished absolutely. On this head, not to weary you with figures, I have not thought it necessary to insert anything in the above short table; but I may refer you to the tables put in by the Board of Trade before the Royal Commission on Trade Depression. Let me only state very briefly that while the average annual amount of copper produced from British ores amounted in 1855 to over 20,000 tons, in 1865 the amount was about 12,000 tons only, in 1875 under 5,000 tons, and in 1885 under 3,000 tons. As regards lead again, while the production about 1855 was 65,000 tons, and in 1865 about 67,000 tons, the amount in 1875 had been reduced to 58,000 tons, and in 1885 to less than 40,000 tons. In white tin there is an improvement up to 1865, but no improvement since, and the only set-off, a very partial one, is in zinc, which rises steadily from about 3,500 tons in 1858, the earliest date for which particulars are given, to about 10,000 tons in 1885, considerably higher figures having been touched in 1881-83. There is nothing, then, in these figures as to miscellaneous mineral production to mitigate the impression of the diminution in the rate of increase in the great staples, iron and coal, in recent years.

Agricultural production, it is also notorious, has been at any rate no better, or not much better, than stationary for some years past, although down to a comparatively recent period a steady improvement seemed to be going on. Making all allowance for the change in the character of the cultivation, by which the gross produce is diminished, although the net profit is not affected to the same extent, and which might be held to argue no real decline in the rate of general growth if the population, diverted from agriculture, were more profitably employed, yet the facts, broadly looked at, taken in connection with the other facts stated as to diminished rate of increase in other leading industries, seem to confirm the supposition that there may have been some diminution in the rate of increase generally.

It is, unfortunately, impossible to state in a simple manner the progress at different dates in the great textile industries of the country. Everything as regards these industries is thrown out by the disturbance consequent on the American War. It does not appear, however, that what has happened as regards the main textile industries, cotton and wool, would alter sensibly the conclusions above stated, drawn from the facts as to other main industries of the country. If we take the consumption of raw materials as the test, it would appear that the growth in the cotton manufacture is from a consumption of 28 lbs. per head in 1855 to about 38 lbs. per head in 1875, while in 1885 the consumption is nearly 42 lbs. per head, an increase of 4 lbs. per head in the last ten years, against 10 lbs. per head in the previous twenty. The percentage of increase in the last twenty years must therefore, on the whole, have been less than in the previous twenty, although in these twenty years the great interruption due to the American Civil War occurred. Of course the amount of raw material consumed is not here an absolute test. There may be more spinning and weaving now in proportion to the same quantity of raw material than was formerly the case. But the indications are at least not so certain and direct as when the consumption of raw material could be confidently appealed to. As regards wool, the comparison is unfortunately very incomplete, owing to the lack of some data for the earlier years: but what we find is that the amount of wool consumed per head of the population of the United Kingdom has in the last ten years rather declined than otherwise, from nearly 11 lbs. per head in the five years 1870-74 to 10lbs. per head only in the five years 1880-84. Here, again, the explanation suggested as to cotton—viz., that there may be more spinning and weaving now in proportion to the same quantity of raw material than was formerly the case—applies. But the answer is also the same, that at any rate the indications of progress are no longer as absolutely. On this head, not to weary you with figures, I have not thought it necessary to insert anything in the above short table; but I may refer you to the tables put in by the Board of Trade before the Royal Commission on Trade Depression. Let me only state very briefly that while the average annual amount of copper produced from British ores amounted in 1855 to over 20,000 tons, in 1865 the amount was about 12,000 tons only, in 1875 under 5,000 tons, and in 1885 under 3,000 tons. As regards lead again, while the production about 1855 was 65,000 tons, and in 1865 about 67,000 tons, the amount in 1875 had been reduced to 58,000 tons, and in 1885 to less than 40,000 tons. In white tin there is an improvement up to 1865, but no improvement since, and the only set-off, a very partial one, is in zinc, which rises steadily from about 3,500 tons in 1858, the earliest date for which particulars are given, to about 10,000 tons in 1885, considerably higher figures having been touched in 1881-83. There is nothing, then, in these figures as to miscellaneous mineral production to mitigate the impression of the diminution in the rate of increase in the great staples, iron and coal, in recent years.

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that growth took place in the earlier period because there were railways in many districts where they had not been before, and there was no room for a similar expansion in the later period. But the difference in the rate of growth it will be observed is very great indeed, and this explanation seems hardly adequate to account for all the difference. At any rate, to repeat a remark already made, the indications are no longer so simple as they were. There is something to be explained.

The figures as to the number of tons of goods carried are not in the above table; nor are such figures very good, so long as they are not reduced to show the number of tons conveyed one mile. But, *quantum valeant*, they may be quoted from the Board of Trade tables already referred to. The increase, then, in minerals conveyed between 1855 and 1865 is from about 40 million to nearly 80 million tons, or 100 per cent.; between 1865 and 1875 it is from 80 to about 140 million tons, or 75 per cent.; and in the last ten years it is from 140 to 190 million tons only, if quite so much, or about 36 per cent. only. As regards general merchandise, again, the progression in the three ten yearly periods is in the first from about 24 to 37 million tons, or rather more than 50 per cent.; in the second from 37 to 63 million tons, or 70 per cent.; and in the third from 63 to 73 million tons, or 16 per cent. only. As far as they go there is certainly nothing in these figures to oppose the indications of a falling-off in the rate of increase of general business already cited.

Coming to the movement of shipping in the foreign trade, the series of figures we obtain is the following, which relate to clearances only, those relating to entries being of course little more than duplicate, so that they need not be repeated: 1855, 10 million tons; 1865, 15 million tons; 1875, 24 million tons; 1885, 32 million tons. And the rate of growth thus shown is between 1855 and 1865 no less than 50 per cent.; between 1865 and 1875 no less than 60 per cent.; and between 1875 and 1885 about 33 per cent. only—again a less rate of increase in the last ten years than in the period just before. Here, too, it is to be noticed, what is unusual in shipping industry, that in the last few years the entries and clearances in the foreign trade have been practically stationary. The explanation no doubt is in part the great multiplication of lines of steamers up to a comparatively recent period, causing a remarkable growth of the movement while the multiplication of lines was itself in progress, and leaving room for less growth afterwards because a new framework had been provided within which traffic could grow. But here again it is to be remarked that the whole change can hardly, perhaps, be explained in this manner, while the remark already made again applies, that the fact of explanation being required is itself significant.

The figures of imports and exports might be treated in a similar manner, as they necessarily follow the course of the leading articles of production and the movements of shipping. But we should only by so doing get the figures we have been dealing with in another form, and repetition is of course to be avoided.

The short table contains only another set of figures, viz., those of the consumption of tea and sugar, which are again commonly appealed to as significant of general material progress. What we find as regards tea is that the consumption per head rises between 1855 and 1865 from 2.3 to 3.3 lbs., or 43 per cent.; between 1865 and 1875 from 3.3 to 4.4 lbs., or 33 per cent.; and between 1875 and 1885 from 4.4 to 5 lbs., or 13½ per cent. In sugar the progression is in the first period from 30.6 to 39.8 lbs. per head, or 30 per cent.; in the second period from 39.8 to 62.7 lbs., or 58 per cent.; and in the third period from 62.7 to 74.3 lbs., or 19 per cent. only. In the last ten years in both cases the rate of increase is less than in the twenty years before.

These facts, I need hardly say, would be strengthened by a reference to the consumption of spirits and beer, the decline in the former being especially notorious. In tobacco again in the last ten years there has been no increase of the consumption per head; which contrasts with a rapid increase in the period just before—viz., from about 1.31 lbs. per head in 1865 to 1.46 lbs. per head in 1875.

No doubt the observation here applies that the utmost prosperity would obviously be consistent with a slower rate of increase per head from period to period in the consumption of these articles, and with, in the end, a cessation of the rate of increase altogether. The consumption of some articles may attain a comparatively stationary state, the increased resources of the community being devoted to new articles. But here, again, we have to observe the necessity for explanation. The indications are no longer so sure and obvious in all directions as they were.

It is difficult, indeed, to resist the impression made when we put all the facts together, leaving out of sight for a moment those of values only. We are able to affirm positively—(*a*) That the production of coal, iron, and other staple articles has been at a less rate in the last ten years than formerly; (*b*) that this has taken place when agricultural production has been notoriously stationary, and when the production of other articles such as copper, lead, etc., has positively diminished; (*c*) that there has been a similar falling-off in the rate of advance in the great textile industries; (*d*) that the receipts from railway traffic and the figures of shipping in the foreign trade show a corresponding slackening in the rate of increase in the business movement; and (*e*) that the figures as to consumption of leading articles, such as tea, sugar, spirits, and tobacco, in showing a similar decline in the rate of increase, and, in some cases, a diminution, are at least not in contradiction with the other facts stated, although it may be allowed that there was no antecedent reason to expect an indefinite continuance of a former rate of increase.

From these facts, however we may qualify them, and many qualifications have already been suggested, while others could be added, it seems tolerably safe to draw the conclusion that there has probably been a falling-off in the rate of material increase generally. The income tax assessment figures, though they could not be taken by themselves in such a question, are, at least, not in contradiction, and there is nothing the other way when we deal with these main figures only. I should not put the conclusion, however, as more than highly probable. Some general explanation of the facts may be possible on the hypothesis that there is no real decline in the rate of growth generally at all; that the usual signs for various reasons have become more difficult to read; that owing to the advance already made, the real growth of the country and, to some extent, of other countries, has taken a new direction; and that the utmost caution must be used in forming final conclusions on the subject. But the conclusion of a check having occurred to the former rate of growth may be assumed meanwhile for the purposes of discussion. The attempted explanation of the causes of change, on the hypothesis that there is a real change, may help to throw light on the question of the reality of the change itself.

II.

Various explanations are suggested, then, not only for a decline in the rate of our progress, but for actual retrogression. Let us look at the principal of these explanations in their order and see whether they can account for the facts; either for actual retrogression, or for a decline in the general rate of material growth equal to what some of the particular facts above cited if they were significant of a general change in the rate of growth imply—a decline, say, from a rate of growth amounting to 40 per cent. in ten years to one of 20 per cent. only in the same period.

One of the most common explanations, as we all know, is foreign competition. The explanation has been discredited because of the exaggeration of the alleged evil to be explained; but it may possibly be a good enough explanation of the actual facts when they are looked at in a proper way. In this light, then, the assertion as to foreign competition would be found to mean that foreigners are taking away from us some business we should otherwise have had, and that, consequently, although our business on the whole increases from year to year, it does not increase so fast as when foreign competition was less. Those who talk most about foreign competition have actually in their mind the unfair element in that competition, the stimulus which the Governments of some foreign countries give or attempt to give to particular industries by means on the one hand of high tariffs keeping out the goods we should otherwise send to such countries, and giving their home industry of the same kind a monopoly which sometimes enables them to produce a surplus they can sell ruinously cheap abroad, and by means on the other hand of direct bounties which enable certain industries to compete in the home market of the United Kingdom itself as well as in foreign markets. But there is a natural foreign competition as well as a stimulated foreign competition to be considered, and it may be the more formidable of the two.

Dealing first with the stimulated competition, the most obvious criticism on this alleged explanation of the recent decline in the rate of increase of our material progress is that the stimulus given by foreign Governments in recent years has not been increasing, or, at any rate, not materially increasing, so as to account for the change in question. People forget very quickly; otherwise it would not be lost sight of that after 1860, as far as European nations are concerned, there was a great reduction of tariff duties—a change, therefore, in the contrary direction to that stimulus which is alleged to have lately caused a change in the rate of our own development. Since about five or six years ago the movement on the Continent seems again to have been in the direction of higher tariffs. France, Italy, Austria, Germany, and Russia have all shown protectionist leanings of a more or less pronounced kind. Some of our colonies, especially Canada, have moved in the same direction. But, on the whole, these causes as yet have been too newly in operation to affect our industry on a large scale. As a matter of fact, with one exception to be presently noticed, the period from 1860 to 1880 was one in which the effect of the operation of foreign Governments in regard to their tariffs could not be to stimulate additional competition of an injurious kind with us in the way above described, but to take away, if anything, from the stimulus previously given. The changes quite lately brought into operation, if big enough, and if really having the effects supposed, might stimulate foreign competition in the way described in the period now commencing; but, as an explanation of the past facts, it is impossible to urge that foreign competition had recently been more stimulated by additions to tariffs than before, and that in consequence of this stimulus our own rate of advance had been checked.

The one exception to notice is the United States. Immediately after 1860 the civil war in that country broke out, and that war brought with it the adoption of a very high tariff. Curiously enough, however, that tariff operated most against us in the very years—that is, the years before 1875—in which our rate of advance was greater to all appearance than it has lately been. In 1883 there was a great revision of the tariff, having for its general result a slight lowering, and not an enhancement of the tariff, and it is with this reduction—that is, with a diminution of the alleged adverse stimulus—that the diminution in our own rate of advance has occurred.

Of course the explanation may be that, although Governments have not themselves been active till quite lately in adding to their tariffs, yet circumstances have occurred to make the former tariffs more injurious in recent years than they were down to 1875. For instance, it may be said that owing to the fall of prices in recent years the burden of specific duties has become higher than it was. The duty is nominally unchanged, but by the fall of prices its proportion to the value of the article has become higher. This is no doubt the case to a large extent. On the other hand, *ad valorem* duties have been lowered in precisely the same way. The fall of prices has brought with it a reduction of duty, and especially on articles of English manufacture, where the raw material is obtained from abroad, the reduction of duty, being applicable to the whole price, must certainly have had for effect to render more effective than before the competition of the English manufacturer. Whether on the whole the reduction of *ad valorem* duties consequent on the fall of prices has been sufficient throughout the range of our foreign trade to compensate the virtual increase of the weight of specific duties from the same cause seems to be a nice question. This being the case, it must be very difficult indeed to show that on the whole the weight of foreign tariffs, apart from the action of foreign Governments, has been increased in recent years so as to affect our own growth injuriously.

Foreign tariffs, it may be said, have become more effective for another reason. Manufacturing industry having itself developed abroad, the same amount of protection given to the foreign industry becomes more efficient than it was. But this, of course, raises the question of the effect of natural foreign competition, which will presently be discussed.

So much for the stimulus to foreign competition due to high tariffs. With regard to bounties very little need be said. They have been the subject of much discussion and agitation for various reasons, and in what I have to say I propose not to touch on the practical question whether these bounties are injurious, and the nature of the political remedies that may or may not be possible. I limit myself strictly to the point, how far any effect which such bounties can have had would account for a diminution in the rate of material growth of the country generally in the last ten years as compared with the ten years just before. Dealing with the question in this strictly limited fashion, what I have to observe first is that hitherto very few bounties have been complained of except those on sugar production and refining; and next, that the whole industries of sugar production and refining, important as they are in themselves, hardly count in a question of the general industry of the United Kingdom. Even if we refined all the sugar consumed in the United Kingdom, and the maximum amount we have ever exported, the whole income from this source, the whole margin, would not exceed about £2,000,000 annually, not one-six-hundredth part of the income of the people of the United Kingdom; and of this £2,000,000 at the worst we only lose a portion by foreign competition, while all that is really lost, it must be remembered, is not the whole income which would have been gained if a certain portion of our labour and capital had been employed in sugar refining, but only the difference between that income and the income obtained by the employment of the same labour and capital in other directions. The loss to the empire may be greater because our colonies are concerned in sugar production to the extent at present prices of £5,000,000 to £6,000,000 annually, which would probably be somewhat larger but for foreign competition. But it does not seem at all certain that this figure would be increased if foreign bounties were taken away, while in any case the amounts involved are too small to raise any question of foreign bounties having checked the rate of growth of the general industry of the country.

Per contra, of course, the extra cheapness of sugar, alleged to be due to the bounties, must have been so great an advantage to the people of the United Kingdom, saving them perhaps £2,000,000 to £3,000,000 per annum, that the stimulus thereby given to other industries must apparently have far more than compensated any loss caused by the stimulus of foreign bounties to sugar production and refining abroad. But to enlarge on this point would involve the introduction of controversial matter, which I am anxious to avoid. I am content to show that nothing that can have resulted from sugar bounties could have affected seriously the general rate of material growth in the country.

Mutatis mutandis, the same remarks apply to other foreign bounties, of which indeed the only ones that have been at all heard of are those on shipping. But as yet, at least, the increase of foreign shipping has not been such as to come into comparison with our own increase, while the portion of the increase that can be connected with the operation of bounties is very small. It would be useless to enter into figures on so small a point; but few figures are so well known or accessible as those relating to shipping.

In neither way, then, does there appear to be anything in the assertion that the protectionist action of foreign Governments in recent years can have caused the check alleged to the rate of growth in our industry generally, assuming such a check to have occurred. I may be dispensed, therefore, from entering on the theoretical argument, which I only notice in passing, that in the nature of things no enhancement of foreign tariffs and no grants of foreign bounties could really check our own rate of growth, except by checking foreign growth still more, which is not the case we are considering, because the allegation is that foreign competition is increasing at our expense. That I do not insist on this argument is not to be considered as a sign that it is dropped, or that I am not fully sensible of its logical completeness. It seems enough, at present, to fortify it by considerations from actual practical facts which no one can dispute.

The question of an increase of foreign competition from natural causes is more difficult. It is beyond all question, as I have pointed out elsewhere, that foreign competition in every direction from natural causes must continue to increase, and that it has increased greatly in recent years. But when the facts are examined, it does not appear that this competition has been the cause of a check to our own rate of growth. One of the facts most commonly dwelt upon in this connection is the great increase of the imports of foreign manufactured articles into the United Kingdom. But the increase in the last ten years is not more than about £18,000,000, taking the facts as recorded in what is known as Mr. Ritchie's return, viz., from about £37,000,000 in the quinquennial period 1870-74 to £55,000,000 in the quinquennial period 1880-84, or about 50 per cent.[1] Out of £18,000,000 increased imports of such articles it is fair to allow that at least one-half, if not more, is the value of raw material which we should have had to import in any case; so that only £9,000,000 represents the value of English labour displaced by these increased imports. Even the whole of this £9,000,000 of course is not lost, only the difference between it and the sum which the capital and labour "displaced" earns in some other employment, which may possibly even be a *plus* and not a *minus* difference. If we add articles "partly manufactured" no difference would be made, for the increase here is only from £26,000,000 to £28,000,000 in the ten years. Such differences, it need not be said, hardly count in the general total of the industry of the country. Further, the rate of increase of these imports was just as great in the period when our own rate of growth was greater as in the last ten years, the increase in manufactured articles between 1860-64 and 1870-74 being £19,000,000, viz., from £18,000,000 to £37,000,000, or over 100 per cent. as compared with 50 per cent. only in the last ten years, and in articles partly manufactured from £17,000,000 to £26,000,000, an increase of £9,000,000 as compared with an increase of £2,000,000 only in the last ten years. Making all allowance for the fall in prices in recent years, these figures still show a greater relative increase of imports of manufactured articles before 1875 than afterwards. It cannot, therefore, be the increased import of foreign manufactures which has caused the check to our own growth in the last ten years.

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[1] See Appendix to "First Report of Royal Commission on Trade Depression," p. 130.

But foreigners, it is said, exclude us from their own markets and compete with us in foreign markets. Here again, however, we find that any check which may have occurred to our foreign export trade is itself so small that its effect on the general growth of the country would be almost *nil.* Take it that the check is as great as the diminution in the rate of increase in the movements of shipping, viz., from an increase of about 55 per cent. to one of 33 per cent. only, that is, broadly speaking, a diminution of one-third in the rate of increase of our foreign trade, whatever that rate may have been. Assuming that rate to have been the same as the rate of increase in the movements of shipping itself, the change would be from a rate of increase equal to one-half in ten years to a rate of increase equal to about one-third only. Applying these proportions to the exports of British and Irish produce and manufactures, which represent the productive energy of the country devoted to working for foreign exchange, and assuming that ten years ago the value of British labour and industry in the produce and manufactures we exported, due deduction being made for the raw material previously imported, was about £140,000,000,[1] then it would appear that if the same range of values had continued, the check to the growth of this trade would have been that at the end of ten years the British labour represented in it instead of having increased 50 per cent., viz., from £140,000,000 to £210,000,000, would have increased one-third only, or from £140,000,000 to about £187,000,000. The annual difference to the energy of the country developing itself in the foreign trade would on this showing be about £23,000,000 only; an insignificant sum compared with the aggregate income of the people of the country, while the country, it must be remembered, does not lose the whole of this sum, but only the difference between it and the sum earned in those employments to which those concerned have resorted, which again may be a *plus* and not a *minus* difference. Even therefore if foreign competition is the cause of a check to our general growth, yet the figures we are dealing with in our foreign trade are such that any visible check to that trade which can have occurred must have been insufficient to cause that apparent diminution in the rate of our material growth generally which has to be explained.

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[1] See *supra*, vol. i., p. 426.

It has to be remembered, moreover, that when the figures are studied and the fall of prices allowed for it is not in our foreign trade that any check worth mentioning seems to have occurred at all. The diminution in the rate of increase in the movements of shipping is very largely to be accounted for in the way already explained, viz., by the fact that the increase just before 1875 was largely owing to the multiplication of lines of steamers, and that a framework had then been provided up to which the traffic has since grown. Even an increase of one-third in the movements in the last ten years may thus show as great an increase in real business as an increase of 50 or 60 per cent. in the movements in the twenty years before. Foreign competition, even from natural causes, is thus insufficient to account for the diminution in the rate of increase of our material growth in the last ten years.

These figures may be put directly another way. The increase of our foreign exports per head between 1860-64 and 1870-74 was from £4 14*s.* 11*d.* to £7 7*s.* 5*d.*, or about 55 per cent., and allowing for an average rise of prices between the two dates may be put as having been at the extreme about 50 per cent. Between 1870-74 and 1880-84 instead of an increase there is a decrease, viz., from £7 7*s*. 5*d*. to £6 12*s*. 9*d*., but deducting about one-third from the former figure for the fall in prices, the real increase in the last ten years would appear to be as from £4 16*s*. 3*d*. to £6 12*s*. 9*d*., or over 35 per cent. The difference in the rate of increase in the last ten years compared with the previous ten is thus the difference between 35 and 50 per cent. only, equal to about £21,000,000 annually on the amount of £140,000,000, assumed to represent the value of British industry in our foreign exports, deduction being made for the value of raw material included. A deduction of this sort from the annual income of the country is too small to account for such a check to the rate of our growth generally as that we are now discussing as probable, especially when we recollect that the labour is only diverted, and it is not the whole £21,000,000 that is lost, but only the difference between that sum and what is otherwise earned, which may even be a *plus* and not a *minus* difference.

To bring the matter to a point, an increase of 40 per cent. in the income of the country in ten years would on an assumed income of 1,000 millions only in 1875, —and the figure must then have been more,—have brought the income up to 1,400 millions; an increase of 20 per cent. would have brought it up to 1,200 millions only, a difference of 200 millions, which must have arisen from the alleged difference in the rate of our material growth in question if it had occurred. Clearly nothing can have happened in our foreign trade to account for anything more than the smallest fraction of such a difference. The figures are altogether too small. We may repeat again then that it is not the check to our foreign trade which foreign competition may have caused to which we can ascribe the recent check to our general rate of growth.

I need hardly add that in point of theory foreign competition was not likely to have the effect stated.

I have set forth elsewhere in an elaborate essay[1] the reasons for holding this opinion; why it is, in fact, that as foreign nations grow richer we should be better off absolutely than if they were to remain poor, though relatively they might advance more than we do. But, whatever theory may say, in point of fact the check to the rate of our material growth cannot, for the reasons stated, have been due to anything which has happened to our foreign trade.

Another explanation which has been suggested, and to which I have myself been inclined to attach considerable weight as being plainly, as far as it goes, a *vera causa*, is the extent to which the hours of labour have been reduced in many employments in consequence of the improvement in the condition of the working classes in the last half-century, and the growth of a disposition to take things easier, which has been the result of the general prosperity of the country. Such causes when they exist, and when they are brought into operation, must tend to diminish the rate of material growth in a country as compared with a period just before when they were not in operation. If we could suppose them brought into operation suddenly, all other things, such as the progress and development of invention, remaining the same, such a reduction of hours of labour and growth of a disposition to take things easy, must produce a check to the former rate of growth.

After some consideration, however, although there is no doubt of the general tendency of the causes referred to, I begin to doubt whether they would explain adequately such a check to the rate of material growth generally throughout the country as is assumed to have occurred. As regards the shortening of the hours of labour, which is the more definite fact to be dealt with, it cannot but be observed that the shortening has by no means been universal. It has been conspicuous among certain trades organized into trades unions; but the unions, after all, only include about a tenth part of the labour of the country. There has been no such conspicuous shortening of the hours of labour among professional men, clerks, domestic servants, and many others whose labour is an essential part of the general sum total. Next—and this is perhaps even more important—the shortening of the hours of labour is not coincident with the beginning of the last ten years, though it has been in full operation for the whole of that period, but rather with the beginning or middle of the previous ten years, viz., 1865-75; so that it should have been fully in operation upon the production of 1875; and the check to our rate of growth if due to this cause should thus have been felt between 1865 and 1875, rather than between the latter date and the present time. The same with the general disposition to take things easy. This disposition did not spring up in a day in 1875, but was probably as effective as a cause of change in the earlier, as in the later, period. It must count for something as a cause of the annual production of the country being less at a given moment than it would otherwise be; but in comparing two periods, what we have to consider is whether the growth of this disposition has been greater in one period than in another; and there are no data to support such a conclusion as regards the last ten years compared with the previous ten.

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[1] See my "Essays in Finance," 2nd series, "Foreign Manufactures and English Trade," p. 240.

We must apparently, therefore, reject this explanation also. It is not adequate to account for the apparent change that has occurred in the rate of our growth from the year 1875 as compared with the period just before. Our progress in periods previous to 1875 took place in spite of the operation of causes of a similar kind which were then in operation, and there is no proof at all that the shortening of the hours of labour and the growth of a disposition to take things easy have been greater since 1875 as compared with the period just before than they were between 1865 and 1875 as compared with the

I have set forth elsewhere in an elaborate essay[1] the reasons for holding this opinion; why it is, in fact, that as foreign nations grow richer we should be better off absolutely than if they were to remain poor, though relatively they might advance more than we do. But, whatever theory may say, in point of fact the check to the rate of our material growth cannot, for the reasons stated, have been due to anything which has happened to our foreign trade.

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After some consideration, however, although there is no doubt of the general tendency of the causes referred to, I begin to doubt whether they would explain adequately such a check to the rate of material growth generally throughout the country as is assumed to have occurred. As regards the shortening of the hours of labour, which is the more definite fact to be dealt with, it cannot but be observed that the shortening has by no means been universal. It has been conspicuous the point now under consideration; and we do not know that they will be permanent at all when prices and wages are fully adjusted.

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[1] See my "Essays in Finance," 2nd series, "Foreign Manufactures and English Trade," p. 240.

The disturbance to industry by the fall of prices generally is also a *vera causa* of a check to the rate of material growth. But the effect of such a cause seems to be confined within narrow limits, and it is not a new cause. It occurs in every time of depression due to discredit, being partly the effect and partly the cause of the depression itself. All that is new recently is the extreme degree of the fall, and I must express the greatest doubt whether a mere difference of degree aggravates materially the periodical disturbance of industry, tending to check production, which a fall of prices from a high to a low level causes. So far as past experience has gone, at any rate, no such cause has been known to check production to any material extent. If any such cause tended to have a serious effect we should witness the results every time there is a shrinkage of values owing to the contraction and appreciation of an inconvertible paper currency, and I am not aware of any such contraction having had the effect described on production, though the effect in producing a feeling of depression is beyond all question. The facts as to the great contraction in this country between 1815 and 1820 are on record, while the experience of the United States after the civil war is also fresh in everyone's recollection. Contraction of currency and fall of prices, though they are painful things, do not stop production materially.

Another explanation suggested is that there is in fact no antecedent reason for supposing that the rate of material growth in a community should always be at the same rate—that a community may, as it were, get "to the top" as regards its development under given conditions, and then its advance should be either less rapid than it had been or it should even become stationary. The defect of this explanation is that it assumes the very thing which would have to be proved.

Is there any other sign except the alleged check to the rate of our material growth itself that in or about the year 1875 this country got "to the top"? It has, moreover, to be considered that on *à priori* grounds it is most unlikely a community would get to the top *per saltum*, and then so great a change should occur as the apparent change we are considering. The persistence of internal conditions in a given mass of humanity is a thing we may safely assume, and if these conditions are consistent with a given rate of development in one period of ten years, it is most unlikely that, save for an alteration of external conditions, there would be another rate of development in the succeeding ten years. Human nature and capacities do not change like that. Scientific opinion, I believe, is also to the effect that the progress of invention and of the practical working of inventions, which have been the main cause of our material growth in the past, have been going on in the last ten years, are still going on, and are likely to go on in the near future, at as great a rate as at any time in the last fifty years. Except, as already said, the apparent check to the rate of our material growth itself, there is no sign anywhere of our having got to the top, so that a stationary condition economically, or a condition nearly approaching it, has been reached.

Last of all, it is urged that the diminution in the rate of material growth, which is in question, must be due to the fact that we are losing the natural advantages of coal and iron which we formerly had in comparison with the rest of the world. This is perhaps only another way of saying that we have got to the top by comparison, though the community of nations generally has not got to the top, and another way of saying also that foreign competition affects us more than it formerly did; an argument already dealt with. But the question whether coal and iron at home are really so indispensable to our material growth as is sometimes assumed appears itself so important that I may be excused for specially discussing the question, notwithstanding that it has virtually been disposed of, as far as any explanation of past facts is concerned, by what has been already said.

The argument proceeds on the supposition—which is no doubt well founded in the abstract and as far as the past experience of mankind is concerned—that in addition to natural capacities of its own a community requires for its prosperity certain natural advantages, fertility of soil, rich and easily worked mines, a genial climate in which labour may conveniently be carried on, and so forth. A community possessing all these things, or the like things, will flourish, but as it ceases to lose any of them its prosperity must become precarious, and population must flow to the places where they can be secured. Of course climate is not a thing which changes, as far as any practical experience is concerned; but relatively the advantage of a fertile soil may be lost, as England has lately lost it in comparison with the United States and other new countries, its soil having become inadequate for the whole population; and still more the advantage of mines, especially mines of coal and iron, on which the miscellaneous industries of a manufacturing country depend, may be lost. Hence it is said the check to our rate of growth in recent years. We have long since lost our agricultural advantages by comparison. Now we are also beginning to lose the special advantages which coal and iron have given. Our mines are becoming less rich than those of foreign countries, and the balance is turning against us. Why should not population relatively flow from England to the United States and other countries as it has passed within the limits of the United Kingdom itself from Cornwall and Sussex to Staffordshire, Lancashire, Yorkshire, and the north? In this view the coal famine of 1873 was the sign of a check such as Mr. Jevons anticipated. What has happened since is only a sequence of the like causes.

I need not repeat in opposition to this view what has already been said as to the inadequacy of any actual decline in our foreign trade to account for such a check to our general growth as is supposed to have occurred. If the loss of our natural advantages of coal and iron in addition to agriculture is having the effects supposed, we ought to witness them in our foreign trade, and in fact we do not witness them to the extent required for the production of the phenomenon in question.

What I wish now specially to urge is that, in consequence of the progress of invention and the practical application of inventions in modern times, the theory itself has begun to be less true generally than it has been. It is no longer so necessary, as it once was, as in fact it always has been until very lately, that people should live where their food and raw materials are grown. The industry of the world having become more and more manufacturing and, if one may say so, artistic, and less agricultural and extractive, the natural advantages of a fertile soil and rich mines are less important to a manufacturing community than they were at any former period of the world's history, because of the new cheapness of conveyance. Under the new conditions, I believe it is impossible to doubt, climate, accumulated wealth, acquired manufacturing skill, concentration of population become more important factors than mere juxtaposition to the natural advantages of fertile soil and rich mines. The facts seem at any rate worth investigating, judging by what has happened in England and other old countries in the last half-century and by what is still happening there.

Take first the question of food. Wheat is now conveyed from the American Far West to Liverpool and London and any other ports in the Old World for something like five shillings per quarter—equal to about half a farthing on the pound of bread, or a halfpenny on the quartern loaf. The difference between the towns of a country with fertile soil, therefore, and the towns of a country with inadequate soil is represented by this small difference in the price of bread. At about fivepence the quartern loaf the staff of life may be about

10 per cent. cheaper in the fertile country than it is in a country which does not grow its own food at all, and which may be thousands of miles away. As the staff of life only enters into the expenditure of the artisan to the extent of 20 per cent. at the outside, and into the expenditure of richer classes to a smaller extent, the difference on the whole income of a community made by their living where the staff of life would be cheaper would be less than 2 per cent.—too small to tell against other advantages which may be credited to them. What is true of wheat is even more true of meat and other more valuable articles of food where the cost of conveyance makes a less difference in the proportionate value of the food *in situ* and its value at a distant point. The same more and more with raw materials. Cotton and such articles cost so little to transport that the manufacturing may as well go on in Lancashire or any other part of the Old World as *in situ* or nearly *in situ*, and even as regards metals or minerals, except coal and perhaps iron, the same rule applies, the cost of conveyance being as nothing in proportion to the value of the raw material itself. As regards coal and iron, moreover, there are many places where they are not in absolute juxtaposition, and if they have to be conveyed at all they may as well be conveyed to a common centre. Iron ore and iron at any rate are beginning to be articles of import into the old countries of Europe, to which the cost, in fact, offers very little difficulty. The additional cost to the miscellaneous manufacturing of a country through its having to bring iron and coal from a distance may thus be quite inconsiderable, and apparently is becoming more and more inconsiderable. As regards raw materials generally it has also to be considered that, owing to their immense variety, there is an undoubted convenience in a common manufacturing centre to which they can be brought. Hitherto they may have come to England and other old countries of Europe in part because coal and iron were abundant there in

juxtaposition; but the habit once set up, there seems no reason why they should not concentrate themselves on the old manufacturing centres. The ruder parts of the coal and iron industry may be attracted to other places, but the higher branches of manufacturing will be at no disadvantage if carried on at the old centres.

On the other hand, the old centres will retain the advantages, which are obviously very great, of climate, accumulated wealth, acquired skill, and concentration of population. That population under the new conditions is to go from them merely because they do not grow food which can be transported to them at the cost of a mere fraction of the aggregate income, and because they have not coal and iron in abundance and in juxtaposition, that abundance and juxtaposition, owing again to the diminished cost of conveyance, being no longer so indispensable as it was to the higher branches of manufacturing, appears certainly to be a large order. What I have to suggest most strongly at any rate is that the advantages I have spoken of as possessed by old manufacturing centres are not unlikely to tell more and more under the new conditions, and that the indispensability of coal and iron is no longer to be spoken of as what it has been in the last century, during which apparently England owed so much of its precedence in manufacturing power to these causes.

To the same effect we may urge the specially great increase of the efficiency of coal in recent years. Cheap coal *in situ* cannot be relatively so important as it was in days when five or ten tons of coal were required to do the work which can now be done by one.

The truth is that the whole change that has been occurring is only a continuation of much larger historical changes. There has almost always in English history been some one industry that was supposed to be king. In the middle ages it was the growth and export of raw wool; last century it was the woollen manufacture itself; early in this century and down to a very late date cotton was king; more lately, since the beginning of the railway and steamship era, it has been coal and iron. How do we know, how can we know, that coal and iron are to reign indefinitely, any more than wool, or the woollen manufacture, or cotton themselves have done? Changes are always going on, and for that reason I believe we should attach the more importance to the increasing signs that it is no longer necessary or indispensable for prosperous communities to live where their food and raw materials are grown—that there may be advantages of climate, of accumulated wealth, of acquired skill, of concentration of population which are now, under the new conditions, overwhelmingly more important. It would be absurd to dogmatize in such a matter. I hope, however, I have said enough to those who care to reflect to satisfy them that the indispensability even of coal and iron to the continuance of our material growth is no longer to be assumed, that there are wholly new conditions to be considered.

To come back to the practical point in all this discussion. Not only is there no sign in anything that has yet happened that the apparent check to our former rate of material growth is due to the loss of natural advantages which we once possessed, but the theory of natural advantages itself requires to be revised. Equally in this way as in the other ways that have been discussed, it is impossible to account for the apparent check to the former rate of our material growth which has been observed.

III.

Having carried matters so far, however, and having found the insufficiency of the various causes which have been assigned for the check to our former rate of material growth, because they have not produced the sort of effect in detail which they ought to have produced so as to lead to the general effect alleged, or because they existed quite as much when the rate of growth was juxtaposition; but the habit once set up, there seems no reason why they should not concentrate themselves on the old manufacturing centres. The ruder parts of the coal and iron industry may be attracted to other places, but the higher branches of manufacturing will be at no disadvantage if carried on at the old centres.

On the other hand, the old centres will retain the advantages, which are obviously very great, of climate, accumulated wealth, acquired skill, and concentration of population. That population under the new conditions is to go from them merely because they do not grow food which can be transported to them at the cost of a mere fraction of the aggregate income, and because they have not coal and iron in abundance and in juxtaposition, that abundance and juxtaposition, owing again to the diminished cost of conveyance, being no longer so indispensable as it was to the higher branches of manufacturing, appears certainly to be a large order. What I have to suggest most strongly at any rate is that the advantages I have spoken of as possessed by old manufacturing centres are not unlikely to tell more and more under the new conditions, and that the indispensability of coal and iron is no longer to be spoken of as what it has been in the last century, during which apparently England owed so much of its precedence in manufacturing power to these causes.

To the same effect we may urge the specially great increase of the efficiency of coal in recent years. Cheap coal *in situ* cannot be relatively so important as it was in days when five or ten tons of coal were required to do the work which can now be done by one.

The truth is that the whole change that has been occurring is only a continuation of much larger historical changes. There has almost always in English history been some one industry that was supposed to be king. In the middle ages it was the growth and export of raw wool; last century it was the woollen manufacture itself; early in this century and down to the rate of material growth would not appear to be so very much less between 1875 and 1885 than in the period just before, as it does in the above figures.

Another broad fact not easily reconcilable with the fact of a great diminution in the real rate of material growth in the last ten years is the steadiness of the increase of population and the absence of any sign, such as an increase in the proportion of pauperism, indicating that the people are less fully employed than they were. The increasing numbers must either be employed or unemployed, and if there is an increase in the proportion of the unemployed the fact should be revealed in the returns of pauperism somehow. The existence of trade unions, no doubt, prevents many workmen coming on the rates who might formerly have done so, but there are large masses of workmen, the most likely to feel the brunt of want of employment, to whom this explanation would not apply.

What we find, however, is that population has increased as follows: between 1855 and 1865 from 27,800,000 to 29,900,000, or 7½ per cent.; between 1865 and 1875 from 29,900,000 to 32,800,000, or nearly 10 per cent.; and between 1875 and 1885 from 32,800,000 to 36,300,000, or over 10 per cent. If it is considered that the figures are not fairly comparable for the early period, owing to the specially large emigration from Ireland, which took away from the apparent numbers of the United Kingdom as a whole, but still allowed of as great an increase in the manufacturing parts of the country as there has been later, then we may take the figures for England only, and what we find is—between 1855 and 1865 an increase from 18,800,000 to 21,100,000, or 12½ per cent.; between 1865 and 1875 from 21,100,000 to 24,000,000, or nearly 14 per cent.; and between 1875 and 1885 from 24,000,000 to 27,500,000, or 14½ per cent. Whether, therefore, we take the figures for the United Kingdom or for England only, what we find is a greater increase of population in the last ten years than in either of the previous decades when the rate of material growth seemed so much greater. If there had been such real diminution in the rate of material growth, ought there not to have been some increase in the want of employment and in pauperism to correspond?

It is one of the most notorious facts of the case, however, that there has been no increase, but instead a very steady decrease of pauperism, excepting in Ireland, which is so small as not to affect the general result. As regards England, the figures are very striking indeed. The average number of paupers and proportion to population have been as follows in quinquennial periods in England since 1855:

	Number of Paupers.	Proportion to Population per cent.
1855-59	895,000	4.7
1860-64	948,000	4.7
1865-69	962,000	4.5
1870-74	952,000	4.2
1875-79	753,000	3.1
1880-84	787,000	3.0

Thus there has been a steady diminution in the proportion to the population all through, accompanied by a diminution in the absolute numbers between 1865-69 and 1875-79, though there has since been a slight increase. In spite of all that can be urged as to a more stringent poor-law administration having made all the difference, it is difficult to believe that a real falling-off of a serious kind in the rate of our material growth in late years as compared with the period just before should not have led to some real increase of pauperism. Change of administration may do much, but it cannot alter the effect of any serious increase in the want of employment in a country.

The corresponding figures as to Scotland are much the same:

	Number of Paupers.	Proportion to Population per cent.
1855-59	123,000	4.2
1860-64	125,000	4.2
1865-69	131,000	4.3

	Number of Paupers.	Proportion to Population per cent.
1870-74	123,000	3·7
1875-79	103,000	2.9
1880-84	100,000	2.7

Here there is the same steady diminution in the proportion of pauperism to population all through as we have seen in the case of England, accompanied in this case by a steady diminution of the absolute number of paupers since 1865-69. The Scotch administration has been totally independent of the English, but the same results are produced.

In Ireland, as already hinted, the history has been different. There has been an increase in the pauperism accompanied by a decline of population. But Ireland is too small to affect the general result.

We are thus confronted by the fact that if there had been a real check of a serious kind to the rate of our material growth in the last ten years as compared with the ten years just before, there ought to have been some increase in the want of employment and in pauperism, but instead of there being such an increase there is a decline. The population apparently, while increasing even more rapidly in the last ten years than before, has been more fully employed than before. To make these facts consistent with a check to the rate of our material growth, we must contrive some such hypothesis as that employment has been more diffused as regards numbers, but the aggregate amount of it has fallen off; another form of the hypothesis as to the effect of shorter hours of labour already discussed. But a little reflection will show that any such hypothesis is hardly admissible. It is difficult to imagine any change in the conditions of employment in so short a time which would make it possible for larger numbers to be employed along with a diminution in the aggregate amount of employment itself.

Another fact corresponding to this decrease of pauperism is the steady increase of savings bank deposits and depositors. These deposits are not, of course, the deposits of working classes only, technically so called. They include the smaller class of tradesmen and the lower middle classes generally. But, *quantum valeant*, the facts as to a growth of deposits and depositors should reflect the condition of the country generally in much the same way as the returns of pauperism. What we find then is, as regards deposits, that the increase between 1855 and 1865 was £34,300,000 to £45,300,000, or about one-third; between 1865 and 1875 from £45,300,000 to £67,600,000, or about one-half; and between 1875 and 1885 from £67,600,000 to £94,053,000, or just about 40 per cent. —a less increase than in the previous ten years, but not really less, perhaps, if allowance is made for the fall of prices in the interval, and in any case a very large increase. Then, as regards depositors, what we find is an increase between 1855 and 1865 from 1,304,000 to 2,079,000, or 59 per cent.; between 1865 and 1875 from 2,079,000 to 3,256,000, or 56 per cent.; and between 1875 and 1885 from 3,256,000 to over 5,000,000, or over 50 per cent. Whatever special explanations there may be, facts like these are at least not inconsistent with a fuller employment of the population in the last ten years than in the previous ten.

Yet another fact tending to the same conclusion may be referred to. The stationariness or slow growth of the income tax assessments in general in the last ten years, as compared with the rapid increase in the ten years just before, has already been referred to as one of the signs indicating a check to the rate of advance in our material growth. But when the returns are examined in detail, there is one class of assessments, more significant, perhaps, than any, of the general condition of the nation, viz., houses, which is found to exhibit as great an increase in the last ten years as in the previous decade. Between 1865 and 1875 the increase in the item of houses in the income tax assessments in the United Kingdom was from

£68,800,000 to £94,600,000, or just about 37 per cent. In the following ten years the increase was from £94,600,000 to £128,500,000, or just about 36 per cent. In "houses," then, as yet there is no sign of any check to the general rate of the material growth of the country. Allowing, in fact, for the great fall in prices in the last ten years, the real increase in houses would seem to have been more in the last ten years than in the ten years just before.

Other facts, such as the increase of Post Office business, may be referred to as tending to the same conclusion. But there is no need to multiply facts. If no hypothesis is to be accepted except one that reconciles all the facts, then these facts as to the increase of population, diminution of pauperism, increase of savings bank deposits and depositors, increase of houses must all be taken into account, as well as those signs as regards production and other factors, which have usually been most dwelt upon in discussing the question of the accumulation of wealth and the material growth of the people. If the signs of a check to production in some directions can be reconciled with the fact of an unchecked continuance of the former rate of growth generally, then the later facts cited as to increase of population, diminution of pauperism, and the like, may be allowed to have their natural interpretation and to be conclusive on the point.

Such a general explanation, then, of the facts as to production in leading industries and the like, referred to in the earlier part of this address, consistent with the fact that there is no serious falling-off in the rate of our material growth generally, is to be found in the supposition that industry by a natural law is becoming more and more miscellaneous, and that as populations develop, the disproportionate growth of the numbers employed in such miscellaneous industries, and in what may be called incorporeal functions, that is, as teachers, artists, and the like, prevents the increase of staple products continuing at the former rate. This supposition, it will be found, has a good deal to support it in the actual facts as to industry and population in recent years.

The foreign trade shows some sign of the change that is going on. Looking through the list of export articles, some remarkable developments are to be noticed. The annexed short table (see p. 138) speaks for itself.

Thus there are not a few articles, of which jute is a conspicuous example, in which there has been an entirely new industry established within a comparatively short period; and though the percentage of increase may not in all be so great in the last ten years as in the previous ten just because the industry is so wholly new, yet the amount of the increase is as great or greater. In other articles, such as soap and British spirits, there is a new start in the last ten years after a decline in the previous periods. Such cases as oil and floor cloth, paper other than hangings, and plate glass are also specially noticeable as practically new trades. The list I am satisfied could be considerably extended, but I am giving it mainly by way of illustration. Finally, there is the item of other articles not separately specified—an item which is always changing in the statistical abstract because every few years one or more articles grow into sufficient importance to require separate mention, so that any extended comparison of this item for a long series of years is impossible. Still it is ever growing, and what we find in the last ten years is that, in spite of the fall of prices, the growth is from £9,700,000 to £10,600,000, or nearly 10 per cent. Many of the articles referred to, it is plain, cannot run into much money, but the indications of a tendency are none the less clear. What is happening in the foreign trade is happening, we may be sure, in the home trade as well, of which in another way the increase in the imports of foreign manufactures, already referred to in another connection, is really a sign, as it implies the growth of miscellaneous wants among the consumers.

The census figures as to occupations tend, I believe, *Exports of the undermentioned Articles in the Years stated, with the Rates of Increase in* 1855-65, 1865-75, *and* 1875-85 *compared.*

	Quantities Exported.				Increase per cent.		
	1855.	1865.	1875.	1885.	1855-65.	1865-75.	1875-85.
Candles, million lbs.	4	4	5·3	7·8	nil	33	47
Cordage and twine, thousand cwts. . . .	110	168	111	177	53	− 34	59
Plate glass, million sq. ft.	0.3	0.6	1.6	3·9	100	166	143
Jute yarn, million lbs.	not stated	4·9	15·9	30.7	—	224	93
Jute manufacture, million yds.	,,	15·4	102.1	215	—	563	110
Iron hoops, sheets, etc., thousand tons . .	,,	116	204	331	—	76	62
Tinned plates, thousand tons	,	63	138	298	—	119	116
Other wrought iron, thousand tons . . .	,,	214	239	348	—	12	45
Oil and floor cloth, million sq. yds. . . .	0.5	2.4	6.3	11.3	380	162	79
Paper other than hangings, thousand cwts. .	106[1]	145	319	733	37	120	130
Dressed skins and furs, millions	not stated	not stated	0·37	3·45	—	—	832
Soap, thousand cwts.	205	140	251	402	− 32[2]	79	60
Spirits, million gals.	3·8	2.0	1.0	2.7	− 47[2]	− 50[2]	170
Unenumerated, values millions	—	—	£9·7	£10.6	—	—	10

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[1] 1858 not separately stated before.

[2] Decrease.

to confirm this observation as to the special growth of miscellaneous industries, but the discussion of the figures would require more preparation than I have had time for, and perhaps more space than can well be spared.

As to the growth of incorporeal functions, which is another fact significant of the supposed change in the direction of the employments of the people, I propose to appeal to the testimony of the census figures. I need refer on this head only to the paper read some time ago to the Statistical Society by Mr. Booth. Among those classes of population whose numbers in England and Wales in the last ten years have shown a disproportionate growth are the following:

Numbers and Percentage of Self-supporting Population employed.

	Numbers.		Percentage.	
	1871.	1881.	1871.	1881.
Transport	524,000	654,000	4.9	5.6
Commercial Class . .	119,000	225,000	1.1	1.9
Art and Amusement .	38,000	47,000	0.3	0.4
Literature and Science	7,000	9,000	—	0.1
Education	135,000	183,000	1.3	1.6
Indefinite	124,000	269,000	1.2	2.3
Total . . .	947,000	1,387,000	8.8	11.9

Following the indication of these figures, whatever qualification they may be subject to, we are apparently justified in saying that an increasing part of the population has been lately applied to the creation of incorporeal products. Their employment is industrial all the same. The products are consumed as they are produced, but the production is none the less real. If a nation chooses to produce more largely in this form as it becomes more prosperous, so that there is less development than was formerly the case in what were known as staple industries, it need not be becoming poorer for that reason; all that is happening is that its wealth and income are taking a different shape.

It is quite conceivable, then, and is in truth not improbable, that a check to the former rate of material growth in certain directions may have taken place of late years without any corresponding check to the rate of material growth generally, which would seem to be inconsistent with such facts as the growth of population, diminution of pauperism, increase of houses, and the like. The truth would seem to be that with the growth of staple industries, such as cotton, wool, coal, and iron, up to a point, there being reasons for the remarkably quick development of each for many years up to 1875, there comes a growth of new wants, the satisfaction of which drafts a portion of the national energy in new directions. Just because certain staples developed themselves greatly between 1855 and 1875 the time was likely to arrive when they would grow not quite so fast. For the same reason the rapid increase for a certain period in the consumption per head of articles like sugar and tea was likely to be followed by a less rapid increase, the wants of consumers taking a new direction. Probably owing to the more and more miscellaneous character of modern industry, it will become more and more difficult to follow its development by dealing with staple articles only, while changes in aggregate values are untrustworthy as indications of real changes owing to changes in prices. Already there seems to be no doubt the staple articles are no longer a sufficient indication.

A supplementary explanation may be added which helps to explain another difficulty in the matter by which people are puzzled. I can imagine them saying that it is all very well to pooh-pooh the non-increase or slower increase of the production of staple articles, and to assume that industry is becoming more and more miscellaneous; but other countries go on increasing their production of these same staple articles.

The increase of the manufactures of cotton, wool, coal, and iron in Germany and the United States, they will say, has in recent years been greater in proportion than in England, which is undoubtedly true. The explanation I have to suggest, however, is that the competition with the leading manufacturing country, which England still is, is naturally in the staple articles where manufacturing has been reduced to a system, the newer and more difficult manufactures and the newer developments of industry generally falling as a rule to the older country. Even in foreign countries, however, there are signs of slower growth of recent years in the staple articles as compared with the period just before. In Germany, for instance, the production of coal increased between 1860 and 1866 (I take the years which I find available in Dr. Neumann Spallart's "Uebersichten") from 12,300,000 tons to 28,200,000, or nearly 129 per cent.; between 1866 and 1876 the increase was from the figure stated to about 50,000,000, or about 77 per cent. only; between 1876 and 1885, another period of ten years, from the figure stated to 74,000,000 tons, or less than 50 per cent.—a rapidly diminishing rate of increase. In the United States of America the corresponding figures for coal are 15, 22, 50, and 103 million tons, showing a greater increase than in Germany, but still a rather less rate of increase since 1876 than in the ten years before. The experience as to the iron production would seem to be different, the increase in the United States and Germany having been enormously rapid in the last ten years; but I have not been able here to carry the figures far enough back for comparison. Still the facts as to coal in Germany are enough to show how rapidly the rate of increase of growth may fall off when a point is reached, and that the experience of the United Kingdom is by no means exceptional. As the staple articles develop abroad the rate of increase in such articles will diminish too, and foreign industry in turn will become more and more miscellaneous.

The conclusion would thus be that there is nothing unaccountable in the course of industry in the United Kingdom in the last ten years. In certain staple industries the rate of increase has been less than it was in the ten years just before, but there would seem to have been no increase or little increase in the want of employment generally, while there is reason to believe that certain miscellaneous industries have grown at a greater rate than the staple industries, or have grown into wholly new being, and that there has also been some diversion of industry in directions where the products are incorporeal. These facts also correspond with what is going on abroad, a tendency to decline in the rate of increase of staple articles of production being general, and industry everywhere following the law of becoming more miscellaneous. Abroad also, we may be sure, as nations increase in wealth the diversion of industry in directions where the products are incorporeal will also take place. What the whole facts seem to bring out, therefore, is a change in the direction of industry of a most interesting kind. If we are to believe that the progress of invention and of the application of invention to human wants continues and increases, no other explanation seems possible of the apparent check to the rate of material growth which seems to be so nearly demonstrated by some of the statistics most commonly appealed to in such questions.

At the same time I must apply the remark which I applied at the earlier stage to the opposite conclusion, that there had been a real check to the rate of increase in our material growth. When the main statistics bearing on a particular point all indicate the same conclusion, it is not difficult to reason from them and to convince all who study them; but when the indications are apparently in mutual conflict it would be folly to dogmatize. I have indicated frankly my own opinion, but I, for one, should like the subject to be more fully thrashed out. It is a very obvious suggestion, moreover, that one may prove too much by such figures—

that it is an outrage on common sense to talk of there being no check to the rate of growth in the country when times are notoriously bad and everybody is talking of want of profit. What I should suggest finally, by way of a hypothesis reconciling all the facts, would be that probably there is some check to the rate of material growth in the last ten years, though not of the serious character implied by the first set of figures discussed; that this check may even be too small to be measured by general statistics, though it is sufficient to account for no small amount of *malaise*; and that the *malaise* itself is largely accounted for, as I have suggested on a former occasion, by the mere fall of prices, whatever the cause, as it involves a great redistribution of wealth and income, and makes very many people feel poorer, including many who are not really poorer, but only seem so, and many who are really richer if they only allowed properly for the increased purchasing power of their wealth. All these facts are quite consistent with the fact of a very slight real diminution in the rate of our material growth generally, and with that change in the direction of the national industry, significant of a general change beginning throughout the world, which would seem to have occurred.

To some extent also it ought to be allowed that the tendency in the very latest years seems unsatisfactory, and that the developments of the next few years should be carefully watched. Up to now there is nothing really alarming in the statistics when they are analyzed and compared. It may be the case, though I do not think it is the case, that causes are in operation to produce that great check and retrogression which have not as yet occurred, though many have talked as if they had occurred. The exact limits of the discussion should be carefully kept in mind.

Fortunately, however, there is no doubt what some of the conclusions on practical points should be. If it be the case that the hold of an old country like England on certain staple industries of the world is less firm than it was, and, as I believe, must be less and less firm from period to period, owing to the natural development of foreign countries and the room there is among ourselves for development in new directions, then we should make assurance doubly sure that the country is really developing in new directions. If our dependence must be on the new advantages that have been described, such as acquired manufacturing skill, concentration of population, and the like, then we must make sure of the skill and of the best conditions of existence for the concentrated population. If, in point of fact, shorter hours of labour and taking things easy have contributed to check our rate of progress slightly, there is all the more reason for improving the human agent in industry, so as to make work in the shorter hours more efficient. Looking at the stir there now is about technical education and such matters, and the hereditary character of our population, I see no cause to doubt that the future will be even more prosperous than in the past. The national life seems as fresh and vigorous as ever. The unrest and complaints of the last few years are not bad signs. But the new conditions must be fully recognized. The utmost energy, mobility, and resource must be applied in every direction if we are only to hold our own.

XVII.

PROTECTION FOR MANUFACTURES IN NEW COUNTRIES.[1]

SO many questions in political economy being questions mainly of degree it may be wondered that appeal is not made more frequently to statistics to help in their solution. These are questions in which no one doubts the main theory, or where for practical discussion the main theory is admitted. We may instance the equality of taxation. In whatever way equality is considered to be established as between classes and individuals, whether by equal taxes *pro rata* upon all or by taxes at progressively higher rates upon the larger incomes, yet equality is allowed to be the thing to be aimed at. In practice, however, there must obviously be degrees of inequality. By the nature of the case the State cannot make a very nice adjustment; it must think of classes and not individuals; while there are many doubts as to the real and ultimate incidence of a great many taxes. If, then, taking the principal taxes in any comparison that may be made, we find inequalities arising through deviations from an average taxation of 5 per cent. on the community, making the percentage 7½ on some and only 2½ on others, with of course intermediate rates, it is quite possible that this state of things may be one which it would be a greater evil to attempt to remedy than to let alone. On the other hand, a deviation from the 5 per cent. average amounting to a proportion of 20 per cent. on some classes of the taxpayers would probably be thought so serious by those affected, that a remedy at all hazards, in a free and self-governing community, would have to be found. But clearly what is true of the one mischief may not be true of the other mischief, and may not compel to the same action.

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[1] From the "Economic Journal" of 1898.

A similar illustration would be furnished by the well-known case of the shilling duty on corn. Import duties on articles of food to protect the home-grower are, of course, bad economically; but given a very small duty of long standing, may not the disadvantages of removing it, necessitating an addition to a disproportionate income tax, be greater on the whole than those of letting it remain? It is the question of degree, as in the previous case of inequality of taxation, which is here the material question.

I have often thought that the principle might be usefully applied in the discussion of Mill's famous exception to the universal applicability of free trade principles, viz.: that import duties for protective purposes might be permissible in new countries in order to begin industries naturally suitable, an idea which has been applied by other writers to manufacturing industries generally, the alleged object being to give variety to the economic *régime* of such countries and promote the increase of a town population. I need not say here that Mill has been very much misrepresented. His exception was a very limited one, and was no more than a statement that there might be cases for protection in the way he mentioned, whereas his statement has been used as an authority for every sort of protectionist mischief, in old as well as new countries. But taking it in its more exact and limited meaning, what seems to me worthy of examination from a statistical view is whether, in fact, manufacturing industries can be promoted to any material extent in really new countries, so as to give that variety to their economic *régime* which protectionists contend for. In other words, how much variety can so be given to the industries of a new country?

Let us begin by quoting the exact words from Mill, in which he gives a little countenance to protection for new countries. First he states (Book V., chap. x., sec. 1):

> "The only case in which, on mere principles of political economy, protecting duties can be defensible, is when they are imposed temporarily (especially in a young and rising nation) in hopes of naturalizing a foreign industry, in itself perfectly suitable to the circumstances of the country. The superiority of one country over another in a branch of production often arises only from having begun it sooner. There may be no inherent advantage on one part, or disadvantage on the other, but only a present superiority of acquired skill and experience. A country which has this skill and experience yet to acquire, may in other respects be better adapted to the production than those which were earlier in the field: and besides it is a just remark of Mr. Rae, that nothing has a greater tendency to promote improvements in any branch of production than its trial under a new set of conditions. But it cannot be expected that individuals should, at their own risk, or rather to their certain loss, introduce a new manufacture and bear the burthen of carrying it on until the producers have been educated up to the level of those with whom the processes are traditional. A protecting duty, continued for a reasonable time, will sometimes be the least inconvenient mode in which the nation can tax itself for the support of such an experiment. But the protection should be confined to cases in which there is good ground of assurance that the industry which it fosters will after a time be able to dispense with it; nor should the domestic producers ever be allowed to expect that it will be continued to them beyond the time necessary for a fair trial of what they are capable of accomplishing."

Next (Book V., chap. x., sec. 2) it is remarked, speaking of American protectionists:

> "It is an injustice to them to suppose that their protectionist creed rests upon nothing superior to an economic blunder; many of them have been led to it much more by consideration for the higher interests of humanity, than by purely economic reasons. They, and Mr. Carey at their head, deem it a necessary condition of human improvement, that towns should abound; that men should combine their labour, by means of interchange with near neighbours, with people of pursuits, capacities, and mental cultivation different from their own, sufficiently close at hand for mutual sharpening of wits and enlarging of ideas, rather than with people on the opposite side of the globe. They believe that a nation all engaged in the same, or nearly the same pursuit—a nation all agricultural—cannot attain a high state of civilization and culture. And for this there is a great foundation of reason."

And then Mill proceeds to argue, amongst other things, that in the case of America protective import duties would not set up towns in Ohio and Michigan, but would merely favour New England as against Old England. He does not dispute, however, that in a really new country protective import duties would have the effect contended for by American protectionists. He rather assumes that the effect will be produced.

At any rate, whatever was Mill's precise view, there is no doubt that protectionists like Carey profess to aim at a larger settlement of population in a new country, so that the agriculturist may have a local market, and so on. Even in Mill, however, one can see that he has in view a large economic change that may be effected by means of protective import duties in new countries—that the question in his mind is a big one and not a little one.

If I were to discuss these passages generally, I should have a good deal to say upon them. It is not a sufficient reason to employ protective duties to set up a new industry in a country that the industry is believed to be suitable for it. Proof is also required that after paying the expense of the operation people will be better off in any way than they would otherwise have been. But I am not discussing the passage generally. I confine myself to the point whether manufactures—what is popularly known as manufactures—can be set up to any material extent in a new country in the way described.

The suggestion I would now make is that, in the nature of things, as far as manufactures are concerned, the possible variation in economic conditions in a new country by means of so-called protective duties to set up manufactures must be quite insignificant. The maximum of the manufactures that are capable of being affected by protective duties is so small, that a new country even if it could get all the manufactures conceivably possible, would practically remain as before without the variety desiderated and without adding sensibly to its population and resources.

The first point I have to make is to note that the primary supposition of all in the above extracts, viz., that an agricultural population is all agricultural, or almost all agricultural, is itself erroneous. If any one follows the distribution of population throughout the world generally, it will be found that a common model of distribution in an agricultural country to which the United States conformed lately, and to which such dissimilar countries as Ireland and India still conform, gives 60 per cent. of the population to agriculture and 40 per cent. to other pursuits, including building, tailoring and millinery, transportation, distribution, and the professions.[1] In some of the Australasian colonies the agricultural proportion is even less, the rural population being only 45 per cent. of the total. The idea that in an agricultural population the people are almost all agricultural is thus, to begin with, entirely wrong, for only about half are agricultural, and if manufactures are to be set up so as to diminish the importation of manufactured articles the problem will be to divert so much of this half as is already producing for export wherewith to buy manufactures into manufacturing for home consumption. But this again is a small proportion. In every country the exports are very largely not for the purpose of buying manufactures, but for the purchase of tea, coffee, sugar, salt, coal, or other articles which are not produced at home. This is conspicuously the case in America and our Australian colonies.

The rule may be made even more general. The predominant industry in any community only employs about half the people. I have been informed by military friends that if a town is permitted to grow up beside a fortress its population may be expected to equal and exceed that of the garrison itself. There is thus, by the nature of things, a natural variety of occupation everywhere. Greater variety may be desirable if a country is to be among the most advanced, but it is not true that there may not be great variety without.

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[1] At the last census the proportion in the United States of the agricultural population was even less than here stated (1904).

The next point is, that in the nature of things there are many manufactures in every country which are either not factory manufactures or are necessarily local. Among the former are the local blacksmith, wheelwright, and saddler, and many more, where even if there is much in proportion that can be imported from abroad there is necessarily a good deal that is always local, because repairs are incessant, and for repairing shops must be at hand. Among the latter are the factories required in newspaper printing for instance, for a newspaper is necessarily local; in the making and planning of windows, floor cloth, carpets, curtains, and other articles in connection with building and furnishing; in the manufacture of mineral waters which are costly to transport; in saw mills in a district with natural timber; to which must now be added refrigerating machinery, where the exports consist in part of chilled or frozen meat, or butter and cheese. Consequently there is not only variety of industry even in an agricultural country, but there are natural manufactures also which it cannot be without. The only manufactures which are in question, therefore, when we speak of protective import duties to set them up, are manufactures of a certain kind, the leading manufactures of the world, which, owing to the great production and other causes, need not be local in their character; and these manufactures, it is clear, can only be a small part of the industry of any country where they are for the home market alone.

My next remark is that we may derive from the experience of England itself, a manufacturing country *par excellence*, a clear indication that the manufactures which are not in the nature of the case local, and which are to be brought into existence by protective duties, must be very small, at best, in a new country. The

United Kingdom is the workshop of the world, but, notwithstanding this, the proportion of the occupied population engaged in manufacturing, including many manufactures that are local in their nature, does not appear to be more than about 20 per cent. The figures are a little difficult, but if we refer to that useful publication, "The Abstract of Labour Statistics," pp. 170-190, we find the total factory population[1] given as 3½ millions, as compared with a total occupied population of 16½ millions, or about one-fifth. Certain deductions, however, must be made for manufactures that are necessarily local, and probably if that were done we should arrive at a proportion of less than a fifth of the population of the United Kingdom occupied in those manufactures which are suitable for exportation, and which new countries would seek to establish by means of protective import duties. To what proportion would that fifth sink if the English manufacturers had only the home market? Answering this question I may say that I doubt extremely if more than 5 to 7½ per cent. of the population would be employed, although the home market of England, owing to the great accumulation of wealth in the country, is no doubt much larger in proportion to population than that of any other country. There is no means of giving an exact answer, but the proportion must certainly be much less than a tenth. Comparing the exports themselves with the above figures of occupied population it appears that about two-thirds of those engaged in manufactures are making for export and one-third for the home market, which would give the proportion above stated; and whatever the real proportion may be, it cannot at any rate be much higher.

My next point is, that if we look at the import statistics of new countries themselves, and compare the manufactures they import with their population and resources, we shall find that these manufactures, if all done at home, would not employ more than the proportion stated of the population, viz., 5 to 7½ per cent.

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[1] This does not include a workshop population of half a million where the industries, however, are almost purely of a local nature for local consumption.

One or two illustrations may be given. We find that in New South Wales, out of about £16,000,000 of imports in a recent year, as given in the statistical abstract, the woollen, cotton, and textile manufactures, and all other manufactures identifiable, inclusive of beer and spirits, amount to about £6,000,000 only. The principal items are:

Imports of Principal Manufactures into New South Wales.

	£
Apparel and slops	1,004,000
Boots and shoes	307,000
General drapery	1,880,000
Iron and steel	577,000
Hardware	200,000
Machinery	271,000
Agricultural implements	35,000
Bags and sacks	148,000
Beer and ale	234,000
Spirits	318,000
Paper	182,000
Musical instruments	47,000
Books	123,000
Earthenware and china	57,000
Drugs and medicines	138,000
Furniture	55,000
Stationery (except paper)	94,000

This is apparently the maximum consumption of manufactures in New South Wales, for which home manufactures could be substituted, even if New South Wales ceased to import any at all, which is inconceivable. The sum cannot be more than 10 per cent. of the total production of New South Wales, and excluding what for climatic and other reasons could not be made in New South Wales at all, we are left with a smaller proportion, say 5 per cent. as the maximum, to which the process of substitution could by any possibility apply.

The corresponding figure for Victoria would be about £4,000,000, the smaller figure here than in New South Wales being partly accounted for perhaps by Victoria having one or two industries, like boots and shoes, where she is an exporting country, and naturally supplies the home market also, and partly by Victoria, though having much the same population, not being quite so prosperous as New South Wales. Still in Victoria we have £4,000,000 only as the maximum of new manufactures that could be set up or much less than 10 per cent. of the total production. The principal items are:

Imports of Principal Manufactures into Victoria.

	£
Apparel and slops	172,000
Bags and sacks	112,000
Beer and spirits	257,000
Books	163,000
Boots and shoes	35,000
Chinaware, etc.	50,000
Drugs and chemicals	83,000
Cotton piece goods	927,000
Furniture and upholstery	12,000
Glass and glassware	40,000
Haberdashery	248,000
Hardware and ironmongery	86,000
Hats, caps, and bonnets	57,000
Hosiery and Gloves	193,000
Galvanized sheet	107,000
Wire	63,000
Leather goods (except saddlery and harness)	91,000
Linen piece goods	27,000
Machinery	121,000
Patent medicines	40,000
Musical instruments	40,000
Printing paper	124,000
Silk and manufactures	214,000
Stationery (except paper)	42,000
Woollen and woollen piece goods	496,000

A similar figure for New Zealand, which has a smaller population than either Victoria or New South Wales, would be about £3,000,000, again much less than 10 per cent. of the total production.

It would be needless to multiply instances, though there are some even more striking because the new countries are smaller. In Tasmania we should have about £400,000 only of manufactures imported of every kind, and here the smallness of the amount, apart from any question of proportion to total production, is important. The least sense of the scale of modern manufacturing production makes it obvious that no manufactures to any great extent, such as will create towns and promote improvement, can be set up in a new country like Tasmania by protective import duties or any other protectionist device.

The next stage of the argument is that, by the nature of the case, many, if not most, of the manufactures which are not local in a new country cannot be established there at all because the market is not large enough. I should define a new country to be where a population of not more than 1 to 1½ millions is spread over a territory the size of England or more. Such a population is quite able to occupy a country agriculturally, and it is a population of this sort that is to be found in our Australian colonies, in many parts of the United States, in Canada, and in the Argentine Republic. And no such community of a million or so spread over a territory like England, and *a fortiori* spread over a larger territory, can have more than a few descriptions of factory manufactures if there is only to be a home market. It is easy to speak of cotton, or woollen, or linen, or silk, or iron, or leather manufactures. But each of these designations in reality includes many manufactures, and for each one of these there may be no adequate market in a population of a million. Therefore, such manufactures cannot be locally established in a new country however much you try. Take shipping. Suppose by some monopoly the colony of Victoria were to endeavour by means of import duties to obtain ships of its own, equal to doing one-half of its foreign shipping business, for on protective principles no country could expect more than half. The total entries and clearances in Victoria in the foreign trade are 4½ millions in round figures, or 2¼ millions one way. Many of the voyages to and from Victoria are to the adjacent colonies and consequently very short, but allowing ten round voyages in the year on the average, we should still have only 200,000 tons of shipping required for all the foreign trade of Victoria, one half of which is 100,000 tons. Accordingly 100,000 tons of shipping would be the ship-owning Victoria could have a monopoly of, which would give twenty-five liners of 4,000 tons each. How much shipbuilding would be necessary to keep going a fleet of 100,000 tons? Perhaps one ship of 4,000 tons per annum with repairs of an equivalent amount. How can Victoria then have a real shipbuilding industry of its own, for the home market alone, which is not more than a plaything? Take the iron trade again. The home consumption of iron in England is about 4,000,000 tons per annum, or about 100,000 tons for every 1,000,000 of the population. This would be the production of pig-iron required in a new country if its wants were on the same scale. How, then, could a new country have a pig-iron industry? The minimum which a single modern blast furnace can produce, without which production cannot be economical, is about 100,000 tons a year, and a country does not require one kind of pig-iron only, but many. The same principle applies to all the stages of the iron manufacture, to rolling mills, the making of bar and hoop iron, and bolt and angle iron, not to speak of the subsequent manufacture of machinery. A new country may make small machinery, perhaps, but the miscellaneous products of the iron industry are plainly not for it. Take again the earthenware and china manufacture, of the products of which home and imported we consume about £4,000,000 annually. On the same scale a new country of 1,000,000 inhabitants would consume about £100,000 worth. A single earthenware and china factory producing only £100,000 worth would not be a very large one, and of course it has to be remembered that pottery is most various, that several factories are wanted if there is to be variety at all—in fact that hardly any one country, not even England, can provide all the variety required. How then can there be important earthenware and china factories in really new countries, if the market is only to be a home market? We might go through the list of cotton, woollen, silk, and other manufactures. Some small manufactures may be set up where there is a combination of a large local demand for some article, coupled with the possibility of meeting it by moderate sized factories, but as a rule the new country is not "in it" in the nature of things, because there is not a large enough market for the minimum production consistent with economy.

My next point is the actual experience of Australasia. One has heard much of the relative advantages of Free Trade and Protection as exemplified by Victoria and New South Wales. But, as a matter of fact, neither country has factory manufactures—not of a local character—to any sensible extent. Take Victoria. According to the Year Book of Victoria for 1895, the latest in my possession, the hands employed in factories, workshops, etc., in 1894 were just about 40,000,[1] the total population of the colony being about 1,200,000, and the occupied population, it may be assumed, being about 500,000. In other words, the manufacturing population, so called, is less than 10 per cent. of the whole number of "bread-winners." The chief constituents of these 40,000 again are:

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[1] See pp. 768-772.

to obtain ships of its own, equal to doing one-half of its foreign shipping business, for on protective principles no country could expect more than half. The total entries and clearances in Victoria in the foreign trade are 4½ millions in round figures, or 2¼ millions one way. Many of the voyages to and from Victoria are to the adjacent colonies and consequently very short, but allowing ten round voyages in the year on the average, we should still have only 200,000 tons of shipping required for all the foreign trade of Victoria, one half of which is 100,000 tons. Accordingly 100,000 tons of shipping would be the ship-owning Victoria could have a monopoly of, which would give twenty-five liners of 4,000 tons each. How much shipbuilding would be necessary to keep going a fleet of 100,000 tons? Perhaps one ship of 4,000 tons per annum with repairs of an equivalent amount. How can Victoria then have a real shipbuilding industry of its own, for the home market alone, which is not more than a plaything? Take the iron trade again. The home consumption of iron in England is about 4,000,000 tons per annum, or about 100,000 tons for every 1,000,000 of the population. This would be the production of pig-iron required in a new country if its wants were on the same scale. How, then, could a new country have a pig-iron industry? The minimum which a single modern blast furnace can produce, without which production cannot be economical, is about 100,000 tons a year, and a country does not require one kind of pig-iron only, but many. The same principle applies to all the stages of the iron manufacture, to rolling mills, the making of bar and hoop iron, and bolt and angle iron, not to speak of the subsequent manufacture of machinery. A new country may make small machinery, perhaps, but the miscellaneous products of the iron industry are plainly not for it. Take again the earthenware and china manufacture, of the products of which home and imported we consume about £4,000,000 annually. On the same scale a new country of 1,000,000 pression compared with 1891, but also in part, according to the explanation in the Year Book, because in the census every individual blacksmith, or carpenter, or harness maker is put down as engaged in manufacture. The factory population, however, is all included in the above figures, which show quite plainly that Victoria, being a new country with a Protectionist tariff, has not acquired the variety of manufacturing industry which the tariff, according to the academic arguments for Protection, was designed to give it.

New South Wales has not been steadily a Protectionist country, and is not now Protectionist; but, as far as manufactures are concerned, it is in much the same economic condition as we should expect it to be if the thesis here supported is true. According to Mr. Coghlan's book on "The Wealth and Progress of New South Wales" (p. 539), the hands employed in factories in 1894 numbered 42,751, out of a total population much the same as that of Victoria, viz., about 1,200,000. The composition was also much the same, Mr. Coghlan's analysis being as follows (p. 541):

	Numbers employed.
Treating raw material, the production of pastoral pursuits	4,020
Preparing materials used as food or drink	7,254
Clothing and textile industries	5,394
Manufacture of building materials	6,176
Metal and machinery works	7,373
Shipbuilding and repairing, etc.	1,505
Furniture and bedding works	794
Paper printing, binding, and engraving	4,284
Vehicles, harness, and saddlery	1,548
Light and heat	1,683
Miscellaneous	2,720
Total	42,751

Thus the Free Trade country, being in like economic conditions, has much the same factory manufactures as the so-called Protectionist country. And in neither case are the manufactures of a description other than those naturally suitable to a new country, which are independent of a Protective tariff. I do not consider exceptions the cases where the colonies in question happen to manufacture for export, this being also a natural development.

The experience of New South Wales and Victoria is therefore in accordance with what a common sense consideration of the question would teach us. The tariff of one is bad, but the bad tariff and the good alike fail to set up the factory manufactures. This cannot be done at all, owing to the want of a market.

We may sum up, then, by repeating that the whole foundation of the idea in Mill is based on a misunderstanding. There is natural variety of industry, even in an agricultural country, to a much greater extent than is commonly supposed. There are also natural manufactures, employing 5 to 10 per cent. of the population, for which Protective duties are wholly unnecessary. Factory manufactures of other kinds, again, have no such place in the economy of a self-contained country as is often assumed. Even in a manufacturing country for export, like England, they are smaller than commonly supposed; and we can well believe that in no country can the factory manufactures, for home consumption only, ever occupy much more than 5 per cent. of the working population. But for such manufactures, as a rule, a new country has not a large enough market. We can see, then, that before Protectionists can discuss their theory as to the benefit of import duties in setting up manufactures so as to give variety of industry, they should discuss the preliminary question as to whether substantial variety can be given that way at all. If, instead of using general language, the Protectionists to whom Mill appears to give assent had said that possibly, but not probably, by means of import duties 1 or 2 per cent. of the population that would not otherwise be occupied in manufacturing might come to be so occupied, the practical look of the remark would have been entirely different from what it is. If Mill, in commenting on it, had introduced the question of quantity and degree of effect, his assent would probably have been much less appreciated by Protectionists than it has been.

The question will naturally arise—How about new countries, or countries with a large new area, and larger populations than we have been dealing with? To this the answer is, that there is more room in such countries for promoting manufactures by means of import duties, or by any other method. There is a larger market, and if you can give a monopoly to any manufacturer within the ring fence, you may establish him in such a country, though you cannot establish manufactures in a new country of the ordinary type. There is more possibility of such Protection in Canada, for instance, than there is in an Australasian colony; and when the Australasian colonies are confederated there will be more possibility of Protection in the united colonies than there is now in the separate ones. This was, in fact, Mill's answer to the American Protectionists. They could advance New England by giving it a monopoly, he pointed out. But the manufactures so to be set up, it should be understood with Mill, are not manufactures complying with the conditions in view. They will not be local manufactures spread over the new country, but manufactures in one or two corners of a large territory, of as little importance in the economic *régime* of a really new area as manufactures in a corner of England. United States Protectionists had thus no excuse at any time for quoting Mill. To set up manufactures in New England instead of Old England, thousands of miles from the new areas, was not setting up manufactures in the new areas themselves.

It would take me away from the present subject to discuss whether manufacturing can be promoted to any good purpose in a country like the United States or Canada, or like what Australasia is going to be, by means of Protective import duties. This involves the direct issue between Free Trade and Protection, and I do not mean to go into that at present. We are discussing the new countries question at present only. But, apart from all theory, we may observe that the intermediate countries between purely new countries and the old ones are at best in a transition stage; that a growth of manufacturing in such countries is inevitable; and that the conditions are also such as to make them so like those of complete Free Trade that the transition to complete Free Trade itself becomes no more than a step. I pointed this out in a recent address in North Staffordshire in another connection,[1] but it is useful to recollect it in the present connection also.

The general case as between Free Trade and Protectionist policy, reviewing the different groups of countries, stands thus. In new countries you cannot promote new manufactures, for reasons in the nature of things, by means of protective duties; in old manufacturing countries you cannot, because such countries, if they are to make way at all, must manufacture for export; in intermediate countries between old and new, matters are in a transition stage, and they are fast approaching the conditions of the older countries. Protectionist policy is thus opposed by the force of circumstances, and another generation or two will probably see the last Protectionist politician, not only in England, but throughout the world. The breed, I am confident, is very nearly extinct, because the modern atmosphere and conditions, not theory, are making the policy next to impossible.

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[1] See *postea*, p. 178.

XVIII.

NOTE ON THE GRESHAM LAW.

THERE is a good deal of misunderstanding of the real law as to bad money "driving out" good, and an overrated metal in a bimetallic system "driving out" the underrated metal, which is commonly spoken of as the Gresham Law. It is assumed that the money driven out must be physically driven out of the country, *i.e.*, exported, and this export is regarded as a fundamental part of the Gresham Law.

In point of fact Sir Thomas Gresham is only responsible for the suggestion that bad coins, *i.e.*, worn and deteriorated coins, drive good ones of the *same metal* out of circulation. Export is, no doubt, specially referred to as the usual effect of such driving out, as it was no doubt the usual consequence in circumstances such as those Sir Thomas Gresham dealt with. But the "law" was only an observation that it is difficult, if not impossible, for good and bad coins of the same metal to circulate together, and the good coins are selected for exportation when a demand for exportation arises. The export is not a necessary part of the "law."

In point of fact, also, good and bad coins will circulate together in a given country as if they were all good when the circulation itself is not in excess of the demand for it. We have many good and bad sovereigns circulating together now in England.

Sir Thomas Gresham made no reference at all to what happens in a bimetallic system or in the analogous case of inconvertible paper when the paper drives the metal out of circulation. Nor are these last cases quite on all fours with those Sir Thomas Gresham referred to. In the case where bad coins drive out good coins of the same metal, the good and bad coins are both doing the same work; so the good are driven out of circulation when there is a surplus because they are more useful for other purposes than the bad, containing more of the metal. When it is a question, however, between two different metals, the coins of the different metals may be performing quite different work. The "driving out" process in this last case must consequently be a different one, when it takes place, from what it is in the case of bad *versus* good coins of the same metal. The same with inconvertible paper *versus* metal. The metal and the paper may be required for *different* purposes, and, so far as that is the case, the paper does not drive out the metal from the same cause or in the same way, or proportions, as bad coins drive out good coins of the same metal. Gold is actually used less or more in currency in every country whether gold or silver is the standard, or whether there is a bimetallic standard with silver as the overrated metal; and gold, and sometimes silver, is also used in inconvertible paper countries in the same way, although the paper is the standard money.

What is true is that the overrated metal and the inconvertible paper in the cases supposed drive the metal they compete with, the underrated metal, out of circulation *as standard money*. As there can only be one standard, the overrated metal or the inconvertible paper, as the case may be, becomes the sole standard. But the underrated metal is not thereby physically driven out of the country at all. It depends upon circumstances whether it is exported or not and how much the export is. Three things happen (besides export, or the chance of it).

1. The underrated metal may be hoarded. This is largely the case, I believe, in almost all cases of inconvertible paper. There were, no doubt, hoards of gold in this country in the inconvertible paper period at the beginning of the century, in the United States during

the inconvertible paper *régime* which began in the civil war, and more recently in Italy, when it had inconvertible paper; and there are hoards of gold at the present day in Austria, Russia, and the Argentine Republic, which are inconvertible paper countries.

2. The underrated metal may be used in actual circulation at a market ratio different from the legal ratio. Locke's proposal was that, as there would always be a market ratio different from the legal ratio, a legal ratio was superfluous or worse. Harris proposed that a legal ratio should be fixed, but changed from time to time as found convenient, the market being followed. But practically in a bimetallic system, although the proceeding is encumbered and inconvenient, the underrated metal can be, and is, commonly used to some extent at a ratio different from the legal ratio.

Gold was always used in circulation in France as a monetary merchandise, when silver was the overrated metal, without any difficulty, but at a premium, not at the legal ratio.

3. Coins of the underrated metal may circulate as a species of token money, either because there has been a heavy seignorage on them, or because they have become worn and deteriorated, so that they occupy the same place, and do the same work, as token coinage of a different metal than the standard does in a monometallic system. This was notably the case in England with the silver coinage during last century. Silver was underrated, and gold had become the standard; but a silver coinage of a very bad description remained, which was used exactly as the silver-token coinage is now used.

In these three ways, then, coins of an underrated metal in a bimetallic system, and coins of different metals in an inconvertible paper country, may remain physically in a country when they go out of use as standard money, without being actually exported.

When export does, in fact, take place, it arises from the formation of a surplus of the underrated metal,

through changes of circumstances as regards the use of it in the various ways specified.

For instance, the habit as to hoarding itself, or as to the use of a particular metal for hoarding, may change. From either cause less of the underrated metal may be hoarded than would otherwise be the case, and a surplus may thus come into existence which will be exported if no other use can be found for it. Much also would depend upon the price. The offer of a higher price might draw from the hoards what would not otherwise be drawn.

The demand for full-weighted coins of the underrated metal for use within the country may also vary from time to time. The different range of transactions, change of custom as to the use of cheques and bank-notes, and the like causes may make a difference. Here again price may also make a difference, though this is not so likely, perhaps, as with regard to hoarding.

As regards worn and deteriorated coins circulating as token money, a surplus may arise through considerable changes in habits as to the use of token money. But probably considerable changes would be necessary to cause the stock of such coins to be drawn on for export, as the price of the underrated metal would have to rise to a point sufficient to make the coins worth more as metal than as coins, before a question of their export could arise.

XIX.

FANCY MONETARY STANDARDS.[1]

IT may be of some service to the study of questions of "money" if I take the opportunity furnished by Mr. Aneurin Williams's paper on "A Value of Bullion Standard" in the last issue of the "Economic Journal," to refer students to a paper by Mr. Bagehot on what is substantially the same topic published in the "Economist" of November 20, 1875. The article in question is entitled "A New Standard of Value," and is a criticism of Mr. Jevons's suggestion of a "multiple standard" in his book on "Money," in the International Scientific series which had just then appeared. Mr. Bagehot's article is anonymous, but of course it is well known that he was then the editor of the "Economist," and I am in a position to state that the article was in fact his own writing. The subject is one in which he took a good deal of interest, as the article itself shows.

Mr. Williams's proposal of a "Value of Bullion Standard" and Mr. Jevons's of a "Multiple Standard" are not in all respects identical. Mr. Williams's proposal, as I understand it, is to provide for an issue of paper which is to consist of promises to pay a varying quantity of bullion, the variation to be made according to the average variation in the price of leading commodities arranged by an "index number." The paper thus issued is to constitute the "pounds" of the new system. Mr. Jevons's suggestion was that, while pounds are still to be so much bullion, the number of pounds payable for a debt was to be varied according to the variations of the "index number." In substance, it

through changes of circumstances as regards the use of it in the various ways specified.

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[1] From the "Economic Journal" of September, 1892.

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The demand for full-weighted coins of the underrated metal for use within the country may also vary from time to time. The different range of transactions, change of custom as to the use of cheques and bank-notes, and the like causes may make a difference. Here again price may also make a difference, though this is not so likely, perhaps, as with regard to hoarding.

As regards worn and deteriorated coins circulating as token money, a surplus may arise through considerable changes in habits as to the use of token money. But probably considerable changes would be necessary to cause the stock of such coins to be drawn on for export, as the price of the underrated metal would have to rise to a point sufficient to make the coins worth more as metal than as coins, before a question of their export could arise.

may add, by the consideration which the recent Committee of the British Association gave to the subject, and which found the practical difficulties to be such that we may wait a long time for the adoption of an official "index number" which can be used even for the more limited purpose of determining the amount of deferred annuities—an attainable object, I believe, but a very different thing from a monetary standard to be in daily use.

The *fourth* and final objection is that it is necessary to a good monetary standard that the thing which is the standard should itself be the medium in which payments are made, or that the medium should consist of currency readily convertible into the thing which is standard, whereas the proposed standard, consisting really of quantities of a great many articles, could never be seen or handled.

For these reasons Mr. Bagehot came to the conclusion that such standards could not be of any use in practice.

This criticism appears to be altogether so destructive as to make it unnecessary to go farther, but for practical purposes I venture to add a few comments of my own, mainly to enforce one or two elementary lessons about money which are apt to be lost sight of by students unacquainted with money market conditions.

First.—Money is not a subject which can be discussed to much profit from the academical point of view alone. Matters of theory must of course be academically considered, but when proposals are made for practice, the main points which must be thought of in practice require to be discussed. Mr. Williams, to speak plainly, does not, from this point of view, discuss the subject at all.

No change in a monetary standard, if it is a tolerably good one, ought to be proposed or considered unless upon grounds of overwhelming necessity. For a good money is so very difficult a thing to get, and Governments, when they meddle with money, are so apt to

through changes of circumstances as regards the use of it in the various ways specified.

For instance, the habit as to hoarding itself, or as to the use of a particular metal for hoarding, may change. From either cause less of the underrated metal may be hoarded than would otherwise be the case, and a surplus may thus come into existence which will be exported if no other use can be found for it. Much also would depend upon the price. The offer of a higher price might draw from the hoards what would not otherwise be drawn.

The demand for full-weighted coins of the underrated metal for use within the country may also vary from time to time. The different range of transactions, change of custom as to the use of cheques and bank-notes, and the like causes may make a difference. Here again price may also make a difference, though this is not so likely, perhaps, as with regard to hoarding.

As regards worn and deteriorated coins circulating as token money, a surplus may arise through considerable changes in habits as to the use of token money. But probably considerable changes would be necessary to cause the stock of such coins to be drawn on for export, as the price of the underrated metal would have to rise to a point sufficient to make the coins worth more as metal than as coins, before a question of their export could arise.

but admitting his contention, where is the overwhelming necessity for considering a change in our monetary standard? It would serve the purposes for which it is used very well, with even greater fluctuations in purchasing power than there have been.

The *second* point I wish to observe upon, is the way in which Mr. Williams talks of "suppressing paper" when bullion falls in price, *i.e.*, when prices rise, because then the notes cover a greater quantity of bullion than before, and the notes are only to be issued against bullion the Government holds; and of "increasing paper" when bullion rises in price, *i.e.*, when prices fall, because then more notes can be issued against the same quantity of bullion, the assumption being that the suppression of paper will make bullion rise again, *i.e.*, will make prices fall, and that the increase of paper will make bullion fall again, *i.e.*, will make prices rise. In this way, he thinks, fluctuations of prices will be automatically corrected.

This is a manner of speaking about paper which I do not understand. How is an issuing institution to "suppress paper" or "increase paper" at will, unless it be inconvertible and managed paper? There is no will in the matter, unless it be that of the customers of the institution, whose demands for paper may vary indefinitely according to customs and habits of every sort and kind, and whose demands must be complied with automatically in any credit system, if frequent shocks to credit are to be avoided. Sometimes much paper will be wanted, as happened, for instance, after the City of Glasgow Bank failure in 1878, and the demand must be met at any cost. No automatic regulation by an issuing body is possible. At other times less paper will be wanted, and, equally, no issuing body can force it, though the attempt at forcing may produce disastrous results.

No doubt it may be said for Mr. Williams's idea that there is much in the language of the authors of the Bank Charter Act, notwithstanding their general soundness on currency, to favour the notion that by putting out or drawing in paper prices could be affected. Lord Overstone and others favoured an idea like this; but surely they were too absolute on this point, and there has been a great deal of experience since the Act of 1844.

Certainly, if paper such as Mr. Williams suggests is to be made a kind of standard, and is only to be issued for the amount of bullion held at the time, it will be necessary to provide that representative paper may be issued containing promises to pay in the standard paper of the Government, so as to prevent the mischiefs of a cast-iron and rigid Government issue. A combination of banks to pledge their mutual credit, such as the New York banks entered into in 1873 when the standard was inconvertible paper incapable of increase, would have much the same mitigating effect. But room for mitigation there must be, and if there is mitigation, how is the anticipated effect on prices to be produced?

I need hardly repeat what I have said elsewhere, as to the complexity of the relations between the quantity of money and prices and the different senses in which the word "money" may be used; and how far apart from reality are speculations like those here indulged in as to the way in which prices may be regulated.

It would facilitate farther the study of the subject, if, in the case of so novel a proposal, those who make it, instead of writing of "paper" in the abstract, would give a specimen of one of their notes, so that one may see what is promised, who makes the promise, and so on. I cannot help thinking that the writing of a specimen note in this case would have brought out some of the difficulties of the undertaking.

A *third* matter, on which I desire to make a remark, is the difficulty of obtaining prices for the "index number," which Mr. Bagehot makes so much of, but which Mr. Williams treats so lightly that he imagines it will be quite a simple matter for a government to make up its index number *daily*. Surely this is not a thing to be taken for granted; but Mr. Williams and any authors of like proposals should give us their idea of what prices are to be got, what guarantees there are to be for them, and why it is thought they can be got daily, or weekly, or monthly, or whatever may be the period fixed for changing the index number.

The only practical index number that has yet been tried, I think, is that of the Corn Returns, on which the tithe average is fixed, and the corresponding fiars prices in Scotland. Here the prices are derived from returns of actual transactions on an extensive scale, and, for fixing the tithe average in England, the prices are the average of the sales of a year over the whole country. To get rid of all inequalities this immense labour is undergone. Finally, while the price for each year is fixed in this way, a farther attempt to get rid of inequality is made by arranging for the payment of the tithe on a septennial average—the average in each year of the prices of the seven years previous. In Scotland the fiars prices are settled by a kind of judicial investigation in each county annually. Now, what is to be the procedure when an official index number is published, embracing perhaps fifty or a hundred commodities, and when the index number is to be varied not annually as in the case of the tithe, but monthly as Jevons proposed, and daily as Mr. Williams proposes? Are the prices to be the average of actual sales, or what; and what basis is to be considered sufficient?

In considering the question of a measure for deferred payments, along with the Committee of the British Association, I suggested a procedure resembling that followed in the case of the Corn Returns and the tithe average, giving the department power to obtain returns of actual sales, and having in view an extensive mass of transactions, and an index number to be varied only at long intervals, such as a year. Even to provide an index number for such a purpose was difficult enough in my judgment, but at the notion of a daily index number I stand aghast.

In a daily index number, either the prices would not be those of actual sales, for often there would be no transactions, or the basis would be so narrow as to give speculators an opportunity of making profit by sales and purchases *ad hoc*, a practical danger of a very serious kind, and which was felt practically when the Corn Returns were made the basis of the sliding scale of corn duties, even upon a six weeks' average.

And if the prices are not to be the average of actual sales, what are they to be? The quotations of dealers in the market of the rates at which they are willing to do business; or what? Such quotations under present conditions are often good enough for statistical purposes when judiciously handled; but an official index number on which transactions are to be based, and on which a great deal of money will depend, is a very different thing. Before talking of a daily or weekly, or even monthly index number, Mr. Williams should give some thought to the construction of index numbers in their practical aspect. If an index number, such as he contemplates, is impossible in practice, as I believe it to be, there is clearly no use in discussing "a value of bullion standard" as a substitute for our present gold standard in the daily business of the country. The construction of the index number is the first step.

Fourth.—A "value of bullion standard," though it might have some effect in mitigating the fluctuations in the unit of purchasing power as measured by commodities, might not really be so stable a standard *for all purposes*, as that which we now have in gold alone. The reason is that in using a monetary standard we have to measure "incomes" as well as commodities.

It is just as important for many purposes that the average money incomes of a community per head, and still more the average-money wages of the wages-earning part of the community per head, should not fluctuate greatly over short periods, as it is that the average prices of commodities should not fluctuate.

But as real incomes and real wages are liable to increase, and happily increase greatly, in a comparatively short period of years, in these days of continual progress in science and the applications of science, it follows that if the standard for money is kept steady with reference to the average of commodities, then it must be unsteady with reference to incomes. Money incomes and money wages must increase greatly on the average, when real incomes and wages are increasing, if the standard for money is at the same time kept even with the average of commodities, that is, if prices are prevented from falling. I do not see that this will be at all a good thing. The rise of real wages between 1850 and 1870 was a good thing; but it would have been better, had it taken the shape of stationary money wages with a fall in prices.

Worse still, Mr. Williams contemplates a daily change in his index number. And as there are always great oscillations, this means that rates of wages would have to be moved up and down continually, so as to give the workman the benefit which he now obtains by a fall of prices without any change in his nominal rate of wages.

I cannot help thinking that our standard for money in the last twenty years has answered social necessities generally much better than a standard which would have varied with the average of commodities. There has been some rise in money incomes and wages in the interval, but not a great rise, and the community generally and workmen particularly have got the benefit of the appreciation of the standard measured by commodities quietly and almost unconsciously, without the excitement which would probably have accompanied a great rise of money wages, such as would have been necessary with "a value of bullion standard" to enable them to receive the advantage of the rise in real wages that they have enjoyed.

In this view, then, the mere statement that "a value of bullion standard" will probably diminish fluctuations in the prices of commodities is not the same thing as a proof, even if the statement were true, that "a value of bullion standard" will be more stable for all the purposes for which a monetary standard is required than a bullion standard itself. Admitting that such a proof could be given, we should still have to inquire whether, all things considered, a bullion standard is not the best, and whether, in particular as regards England, a case can be made out for incurring the risk and inconvenience of changing the bullion standard we have already got; but, even on the score of the superior stability claimed theoretically for "a value of bullion standard," there is no case made out.

These various objections all go to show that "a value of bullion standard" is not a thing which can be put forward as a practical scheme. There must be a great deal of discussion on many points which its author does not refer to before it can even be entertained. Mr. Bagehot might have stated many more objections than he did, and I am sure, if the matter were gone into, there are many more objections behind.

I shall probably be told, as I have been told, that to object to currency proposals in this way is to raise up a *non possumus* sort of barrier to all currency improvement, and that this is to be too conservative. The answer is, that the objection is to such proposals as matters of practice, and that there would not be the same objection to them if they were put forward as merely theoretical proposals, with some acknowledgement of the practical conditions which make their acceptance in any real world, and especially in the real world of England at the present day, out of the question. Put forward in this manner, they could be discussed freely, and there are many theoretical points about money which would probably reward discussion, to which for one I should by no means be averse. It is conceivable, for instance, that in an ideal world an improvement could be made on any existing monetary system by leaving the issue of paper entirely free to everybody, on the distinct understanding that notes are credit instruments only, payable on demand by the issuers. I believe that, if in the past such a plan had been fairly tried, we should now in England have a better monetary system than we have, excellent and nearly perfect as I believe that system to be for all the great ends of a monetary system; and we should be free of a great deal of the dismal discussion that has arisen in consequence of paper being made legal tender and being supposed to be money in some peculiar sense that cheques and the like credit instruments are not. Our whole banking system would also have been better than it is, because more naturally arranged. It is conceivable, again, that in an ideal world one pound notes would be advantageous, especially if the system of issuing them had grown up naturally. But I should not dream of suggesting or defending any of these theoretical improvements practically. They are not great enough to excuse a disturbance of the existing system. The use of discussing them at all is that experts may be prepared for emergencies and for dealing with monetary systems in disorder, when reasons of overwhelming necessity can be given for change. Always, however, in the discussion of such points, if it is to be profitable at all, its necessarily theoretical character should be kept in mind; and the very different points that must be considered in dealing with a practical proposal, such as I have explained above, should be equally remembered. If a monetary system is of such a character that it can hardly be meddled with at all, even for the best objects, without great risks and inconvenience, then the advantages to be gained must always be weighed against such risks, or apprehended risks, whenever we come to business, and this question of relative advantage, supposing the theoretical case for improvement to be made out, is very often the main matter in the practical discussion. I hardly think that of late years the enormous practical dangers of meddling with a settled monetary system, which hardly any theoretical gain would compensate, have been sufficiently realized by our younger economists, fresh from the universities and but little acquainted with the conditions of money and business, and I trust that what has been said here will be of some use as a caution.

XX.

PROTECTIONIST VICTORIES AND FREE TRADE SUCCESSES.

DURING the American Civil War a friend of mine, who was a careful student of the military operations, used often to remark that the war was one in which the South had all the victories, and the North all the substantial successes.

I am often reminded of this when I hear the common talk of the victories of Protection.

Free Trade, we are often told, is going back in the world. Every country except England has a Protectionist policy. Every day we hear of Protectionist measures being introduced in this country or the other. In other words, Protectionists are having many victories. They have not quite so many as they seem to have. On the other side we have to count such a victory as the last one of the Free Traders in New South Wales, or the recent stroke of Sir Wilfrid Laurier and his colleagues in Canada.

But we may grant to the Protectionists that they do score many victories, or so-called victories. What I wish to point out is the continual and substantial success of Free Trade throughout the world.

Free Trade, in my view—*i.e.*, the practice of Free Trade—is really spreading and growing while Protectionist politicians are talking of their victories, and making a tremendous fuss over this and that petty interference with trade—over an autonomous tariff, perhaps, or over the stoppage of the importation of prison-

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[1] Speech delivered at the annual dinner of the North Staffordshire Chamber of Commerce, at Stoke, December 15th, 1897.

made mats and brushes, or over the imposition of countervailing duties on sugar.

The real extent of Free Trade.

The demonstration that the real success is all the while with Free Trade is easy enough.

Let me begin first of all by showing that the bulk of the industry of the world—nine-tenths, or ninety-nine hundredths, or perhaps even more—is already carried on under Free Trade, and not under Protectionist conditions.

Take the fact to begin with, that the British Empire is, on the whole, with one or two exceptions, unimportant by comparison, a Free Trade Empire. What does this mean?

The answer is that the Protection of every other country—grant that the rest of the world is Protectionist—is modified by the existence of this great Free-Trading community.

Protectionist countries may erect barriers against trading with us, but so long as we erect none the net hindrance to trade is very much less than if we were to follow their example.

Do not suppose that we are only one of several approximately equal nations in this matter. The British Empire is a very large part of the world, commercially speaking. I do not wish to bore you with figures, but if we take the aggregate imports and exports of the world, omitting some places like Gibraltar, Malta, and Holland, which are places mainly of transit trade, we might reckon that out of a total of three thousand millions or thereabouts the British Empire alone counts for one thousand millions. If we include with it various minor countries—such as China, for instance—which are really not Protectionist in their foreign trade, we may say broadly that a third to half the world is Free-Trading.

Hence, Protection is far less mischievous even to

Protectionist countries than it would otherwise be, and the world as a whole suffers less from Protection than it certainly would do, if the British Empire, like some of its neighbours, were to engage in the game of erecting barriers to trade.

This is not all. The greater part of the world is now formed into large States, and within the ring-fence of each there is complete Free Trade.

We have now at the top of the world six great States—the British Empire, the United States, Russia, Germany, Austria-Hungary, and France, to which Italy might, perhaps, be added as a very considerable State. The bulk of the foreign trade of the world is carried on between these States themselves, and if they are all, excepting ourselves, Protectionist in their policy in their external relations, they are as certainly Free-Trading internally, each within its own borders.

The only exceptions, not important ones, are some of our own self-governing colonies.

The British Empire, no doubt, is also not within a single ring-fence. For geographical reasons it cannot have a Zollverein. But trade is practically free inside the Empire all the same, with exceptions which are of no real importance.

All this means that the great countries of the world have so much Free Trade at home that the conditions of each individual industry at home are assimilated or approximate to those which would exist if there were unrestricted competition with all the world.

It is quite obvious that the larger and more varied in geographical conditions the area of a State is—the more that it is an image of the whole world—the more like the conditions of trade inside it must be to those of the world generally.

Protectionists, however, notwithstanding all their boasting, have not the courage of their convictions. They will not set up Customs lines with Protective tariffs inside a particular political area, however large, although all the economic conditions are present which they plead as excusing such tariffs. We must not be surprised, therefore, if some of the mischiefs of "Protection" which theory and experience make us expect do not make themselves much felt in the real modern world. Even the most Protectionist country is far from having unadulterated Protection.

We may go a little further. Protectionist countries, even as regards their foreign tariffs, are far from giving much Protection. They have mostly very extensive lists of free imports. Half the imports into some of them, I should say, are either admitted free of duty or at very low rates of duty not calculated to be of a Protective character.

Again, of the remaining duties there are a large number that are really not Protective.

There is often some confusion on this head. A high Customs tariff is often spoken of as if it were a Protective tariff. But this is a *non sequitur*. A high Customs tariff is usually a bad thing, apart from its Protective effect, but we must not call it Protective unless there is a home industry whose products escape the duties that are charged on the like articles imported from abroad. In this sense many of the duties imposed in so-called Protectionist countries are not Protective at all. There is no home industry in existence to be Protected. The high duties are thus revenue duties, often bad duties of their kind, but they are not Protective in the proper sense of the word.

I was greatly struck during a visit to Australia some years ago by the ineffectiveness of the tariffs of the Australian colonies, even those that were most Protectionist in their policy, for any purpose of Protection, because the industries to be protected did not exist. The whole manufacturing population of a colony like Victoria, with a total population of 1¼ millions, is not more than 50,000 or 60,000, and a large part are engaged in the manufacture of mineral waters and in other manufactures, which would, in any case, be local, whatever the tariff.[1] Even with countries more advanced in manufacturing, like France, the United States, and Germany, there are many specialties where there is no home industry to compete with the imports. To take the United States; it is doubtful whether even 5 per cent. of the producers receive any Protection from the tariff of any sort or kind. Thus, in spite of all that Protectionist policy may do, even the most Protectionist country nowadays conducts the greater part of its business under Free Trade conditions.

I believe it cannot help doing so; but, theory apart, there is no doubt of the fact.

Successes on the side of Free Trade.

I come, then, to the proof of the proposition with which I started—that the substantial successes in matters of commercial policy have been for a long time past, and still are, on the side of Free Trade, and not on the side of Protection.

Not only is there far more Free Trade in the world than people sometimes think, but much of it is of very recent growth.

(1) The great success of Free Trade in England half a century ago was itself so gigantic that it amounted to a conversion of the world for good to the practice of Free Trade. From being almost all Protectionist the world at a jump became half Free Trade. It was the decisive step which cannot be undone.

I believe this all the more because I am quite satisfied that the step was not taken out of any love for the abstract theory of Free Trade. It arose out of necessary conditions which were felt in the daily life of the nation, because the great industries of the country had no need of Protection at home, and because cheap food and raw materials were essential to the welfare of the masses and to the prosperity of the export trade.

The like conditions must make the leading countries of the world Free-Trading in time, whatever their theories of policy may be. Free Trade in England has, in any case, come to stay.

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[1] See *supra*, vol. ii., p. 145.

(2) The next great Free-Trading measure, the Cobden Treaty of 1860, has never been really reversed. There is much talk as if it had been. We have heard a great deal of the revival of Protection in France and elsewhere. I believe, also, that the policy of commercial treaties is antiquated. But practically the tariffs of the leading countries of the world still show the marks of the Great Revolution of 1860. They have not gone back to the astonishing perversities and absurdities of the pre-Cobden period.

(3) The great growth of large communities in ring fences, which are of more or less recent establishment, has itself been a continuous triumph of Free Trade during a century or more. Little more than a century ago Europe outside Russia was carved into almost innumerable States, while within the boundaries of countries like France and the United Kingdom, more or less united, there was more than one Customs line. At the same time, there was no Indian Empire; Russia was comparatively a small State; and the United States were only just beginning to be.

Look at the changes that have been made. The Customs lines inside France were abolished with the Revolution. Inside the United Kingdom they came to an end early in the century. Instead of the innumerable German States, a Zollverein was created in 1857, followed by the creation of the German Empire in 1871. Instead of the many Italian States, a united Italy was formed in 1862. Instead of a small Russia, we have an enormous empire in population as well as area within a ring fence, while the closer political union established with Poland and other dependent States has also diminished Customs barriers in that empire.

Looking further afield, we find an Indian Empire also created; and last of all, but certainly not least, we have the United States, created by its Constitution a

Free Trade State within its own domain, and the growth of population during this century being absolutely without precedent in the world's history.

All this huge consolidation of States and growth of large communities, each with Free Trade in its own borders, is virtually a triumph of Free Trade. They make quite certain that the bulk of the industry of the world will henceforth be carried on under conditions assimilated to those of absolute Free Trade. From this condition of things to the most absolute Free Trade itself is not a large step.

Without speculating on the future we may also notice, I think, that very considerable movements in the same direction are now in progress. The Confederation of Canada twenty-five years ago was a step in this direction, the importance of which will appear more clearly with the great growth of the Canadian population which is now at hand.

The completion of the Australian Confederation will be another step of the same kind.

The extension of the South African Customs Union, which we must all look forward to, will be a third step of the same kind.

(4) Next, we must claim on behalf of Free Trade all those scientific inventions of the century—the steam-engine, the locomotive, the iron and steel ship, the electric wire, and submarine cable, and many more—which have facilitated communication between different parts of the world, or which have diminished the cost of production.

The true enemy of a Protectionist policy is the man of science. The man of science makes it possible to bring a particular commodity to Europe at a half or a third of the cost at which it could formerly be brought. When trade is quite free, Europe is so much the richer. The Protectionist steps in and says, "Nothing of the kind, Europe must continue to use the old machinery and old processes, and not be any the richer at all."

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Looking further afield, we find an Indian Empire also created; and last of all, but certainly not least, we have the United States, created by its Constitution a ist, Mr. Taussig, which I find in the last number of the American "Quarterly Journal of Economics":

"With the wide diffusion of a high degree of mechanical ingenuity, of enterprise, of intelligence and education, it is certain that the United States will be, and will remain, a great manufacturing country. The Protective system will be of less and less consequence. The deep-working causes which underlie the international division of labour will indeed still operate, and the United States will still find her advantages greater in some directions than in others. The ingenuity of legislators will still find opportunity to direct manufacturing industry into channels which would not otherwise be sought. Witness some of the minor duties, complicated in form and weighty in effects, under the Acts of 1890 and 1897. But the absolute effect, still more the, proportional effect, of such legislation on the industrial development of the country will diminish. The division of labour within the country will become more and more important, while international trade will be confined more and more to what may be called specialties in manufactured commodities, and articles whose site of production is determined mainly by climate. Not only sugar (for the present), tea, coffee, and the like, but wool also belong to the class last mentioned. as to which climatic causes dominate; and the duties on wool, with those on woollen in their train, are thus the most potent in bringing a substantial interference with the course of international trade. But, on the whole, Protective duties, however important they may be in this detail or that, cannot seriously affect the general course of industrial growth, and will affect it less and less as time goes on. Some indications of this trend are already to be seen in the eagerness with which a fresh opportunity for applying the Protective system is welcomed, and even sought, by the party now dominant. And an important consequence is that this question can hardly avail much longer as a great issue in politics. As the great industries of the community become more and more indifferent to legislative bolstering, the public will become more and more indifferent to the Protective controversy."

All this, I believe you will agree with me, is most interesting. Protection is played out in the United States, because the economic conditions are now such that there is nothing substantially to protect.

Some Protectionists will perhaps say that this is the result of their policy, America having got its manufactures by means of Protection in the past—a proposition in which I cannot follow them. But, whatever the past history may have been, the present position is clear. The United States *nolens volens* must very soon become a country of international Free Trade.

The Facts on the Side of Free Trade.

To sum up, then, you have the actual facts on the side of Free Trade, not only of the great success of Free-Trade policy, first in the conversion of the British Empire and next of a very general extension of its policy by means of the Cobden Treaties, but you have on the same side the consolidation of States and the growth of great communities each with internal Free Trade; you have also the constant tendency of science to cheapen the cost of production and means of communication; and you have, finally, the growth of conditions in the most important countries of the world such as heralded complete Free Trade in this country itself, causes which must produce the like results.

The old order is changing rapidly, and Protectionist commercial policy is fast dying, if it is not as good as dead.

The average man and politician, therefore, who talk glibly of their Protectionist policy, are the Rip van Winkles of the modern world. The world is moving on in spite of them, and their petty interferences are too ridiculous for serious discussion. Is it possible to suppose that the people who propose M'Kinley tariffs on the other side of the Atlantic, or the people who here propose countervailing duties and other old-world apparatus of Protection, are not going to be found out, when all the actual conditions of business are against them?

I have given you, I fear, a long sermon, but my application will be short. I am not in any case one of those people who profess to instruct business men what to do in their own business. If people in business do not bestir themselves to do their very best in order to make a living, they will hardly be moved by lectures in consular reports or in newspaper articles as to their remissness in seeking foreign markets and catering for their customers. Business men, however, are sometimes found to rely on some hoped-for Protection from Government, and in this way I hope it will do some good, especially to the younger generation, if it is made clear, and yet again clear, that the time is past for Protection, and that no industry can live anywhere which is not able to face the most unrestricted competition.

A better living, I believe, can now be made by every one who is willing to work than could have been made at any previous time of the world's history; but work there must be in the bracing and tonic air of competition; no reposing in quiet corners with comfortable monopolies or under the protection of a paternal Government which takes care of people who do not care for themselves.

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To sum up, then, you have the actual facts on the side of Free Trade, not only of the great success of Free-Trade policy, first in the conversion of the British Empire and next of a very general extension of its policy by means of the Cobden Treaties, but you have on the same side the consolidation of States and the growth of great communities each with internal Free Trade; you have also the constant tendency of science to cheapen the cost of production and means of communication; and you have, finally, the growth of conditions in the most important countries of the world such as heralded complete Free Trade in this country itself, causes which must produce the like results.

The old order is changing rapidly, and Protectionist commercial policy is fast dying, if it is not as good as dead.

The average man and politician, therefore, who talk glibly of their Protectionist policy, are the Rip van Winkles of the modern world. The world is moving on in spite of them, and their petty interferences are too ridiculous for serious discussion. Is it possible to suppose that the people who propose M'Kinley tariffs itself; and second, that the rate of interest before the emergency comes about has not changed from the present level, apart from the usual oscillations between times of good and bad credit. Such a discussion may bring up interesting points as to the conditions of national credit, and the use of a sinking fund for the redemption of debt, or for the provision in some other way of a reserve against emergencies, by a Government in the position of that of the United Kingdom.

The high price of Consols at the present time naturally suggests that in time of stress the rate at which new loans could be raised would be correspondingly high. The rate would be less of course than the present, because any new issue tends to lower the price for the time of existing issues, and still more a new issue in circumstances like those suggested, but the rate would still be high. It is the assumption that the rate would be *correspondingly* high, which I propose to dispute. On the contrary, the market for Consols for some years has been an artificial one. When it becomes a natural market again, as it must do when large new issues take place, and when practically a new market would have to be found, the price would be considerably lower than it is now.

Passing over for the moment the fact of the artificial character of the market for Consols at the present time, there are plenty of precedents to show that if the market were natural the price will probably not fall very much at first in the circumstances described. In the Franco-German war in 1870 the drop in French 3 per cents. on the declaration of war was from 73 to 66. A fortnight before the declaration of war in this case everything was peaceful, and there was no sign whatsoever of any such outbreak being at hand. Consequently, the price after the declaration of war and the price a fortnight before measure the difference caused by the war itself, and by the apprehensions immediately excited as to what new issues would be.

The event was not discounted beforehand. This difference, then, was from 73 to 66, or about 10 per cent. In the case of Germany the fall in Government stocks was even greater; but that is hardly a good precedent, on account of the small amount of the stocks themselves, and the absence of a first-class market for securities at that time in Germany. The fall in other stocks at the same time, especially the fall in the weaker foreign stocks, such as Italian, was much greater than what has been stated, partly owing to the suddenness of the panic which broke out on the Paris Bourse and on the London Stock Exchange; but in such emergencies, for obvious reasons, the change in the value of Stock Exchange securities may be greatest, not in the securities of the Governments themselves who are directly concerned, but in those securities in which at the time there happens to be most speculation and which happen to be weakly held. In the first-class securities of the Governments themselves, the change is much less, and the case of what happened in France when the war of 1870 broke out is accordingly very much to the point. Similarly at the time of the Penjdeh incident, when there was great apprehension of an immediate war between this country and Russia, the drop in Consols in one day was about five points, or more than 5 per cent. At the time of the recent Fashoda incident, threatening as matters looked for a few days, the drop in Consols was even less, and was very quickly recovered.

There is no reason in substance, if we think of the matter, why the fall in such a case should be very great, assuming all the present prices to be natural prices. Apart from panic the appearance of great States as borrowers for a few hundred millions is not calculated really to disturb the markets very much, as these issues to a large extent would do no more than absorb new savings which now go into all sorts of other new issues. I should say, however, that in the event of an actual outbreak of war between this country and one or two great powers such as France, Germany, and Russia, the commotion at first would probably be somewhat greater than anything that was indicated even by what happened in France at the time of the Franco-German war. At that time all the markets were steadied by the neutrality of England, in which lay far and away the biggest market for securities at the time. A war in which England would itself be engaged would be one in which the same equanimity could not prevail in the general markets for securities, because it is the country of the chief market which would be concerned.

I should be inclined to assume, then, following the precedent of 1870, that the outbreak of a great war in which England itself would be engaged, would depress the price of first-class securities even more than the 10 per cent. which was the measure of the difference to France at the beginning of its war with Germany. The difference perhaps would be not less than about 15 per cent.

In support of the latter view it may be pointed out that as the war between France and Germany progressed, and indicated a greater danger for France than had been at first anticipated, the 3 per cents. quickly fell to the price of 53, which was the price just after Sedan and the beginning of the Siege of Paris. Just for the reason that there would be no outside market to support prices, such as there was in England in 1870 when the Franco-German War broke out, any great calamity happening to England must have a greater effect on the market for English stocks than the calamities which happened to France in 1870 had upon French stocks.

On the outbreak of war, then, between England and other countries, there is fair reason to expect in this view that the price of first-class securities all round would fall something like 15 per cent.; and my special contention now is that in English Government securities in particular, owing to the market at the present time being artificial, the fall would probably be greater. The artificial premium in fact would disappear, and then the English Government securities would share in the general fall which the outbreak of war occasions.

Before showing in detail the reasons for thinking that at present the price of English Government securities is artificial, it will be expedient to discuss generally what are the conditions of a natural market for securities of the best kind; that is, a first-rate market.

These conditions appear to be as follows: (1) There must be a large quantity of the security itself; the security, in fact, must be large enough for many people to be interested in it, and for large dealings to take place. (2) There must also be a large quantity of the security relatively to the general business of the market. It is a help to such a security if it is the leading security in the market, because in that character it attracts a great deal of speculative interest, and speculative dealings take place accordingly in that security almost to the exclusion of others. It was noticed at the time when English Government securities were divided into two large classes, one Consols and the other New and Reduced, that although these two stocks were identical in every respect in their conditions, yet the fact of the speculative dealings being in Consols permanently raised the price about a half to 1 per cent. above that of the New and Reduced stock, which was identical in every respect except that of being called by the same name. (3) There must be a large quantity of the security in the hands of dealers and other holders about the market who study the security and are always ready to buy and sell. This last condition almost follows of necessity from the other two; in the case of the leading security in any market, it could not be leading unless a considerable amount of it was held from time to time by dealers, both those persons known as dealers in the market itself and others who are about the market, and are technically not known as dealers, but who are, in fact, frequently ready to buy and to sell. It is necessary, however, to state the point separately when large masses of securities have come to be in existence without any speculative dealing taking place in them. It may be possible to use the average prices of such securities from time to time to show the general level of interest which prevails; but experience has shown that no such average, however ascertained, can be taken as a real test of market price in the same way that the price of a security fulfulling all the conditions above stated can be taken. In the latter case the market price is a safe guide; in no other case can it be taken as a complete guide, especially as regards any particular stock, when a considerable change is about to occur in the quantity of the stock itself or in the general conditions of the market. Without such a guide, an enormous addition to the supply of any stock implies, in fact, the making of a new market, for which new customers and operators have to be found.

Formerly, and until quite recent years, the above were especially the conditions of the market for Consols. English Government securities in the early years of the century were of very great amount—£900,000,000 sterling after the close of the great war in 1815. They were also almost the whole market for securities at the time, occupying, at any rate, not merely a pre-eminent but a predominant position. The funds were then something *sui generis*, spoken of in contrast with land, houses, and other investments not on the Stock Exchange. Even a quarter of a century ago Consols still occupied a leading place. The debt was then still £800,000,000, and the funded debt alone about £740,000,000. No doubt even then Consols were beginning to be thrust aside by other great markets,—the English railway market, the market for American Government and other securities, the market for various foreign loans (Turkish, Egyptian, Italian, Russian, and others, including for a time French Government securities), and other miscellaneous markets gradually growing in importance. Still, Consols occupied a pre-eminent if not a predominant position, and they were the leading market. They still complied with all the conditions of a first-class market.

But in the last quarter of a century, and especially within the last few years, the position has been entirely changed.

1. The Debt is still large, being now about £630,000,000, or £670,000,000 if we include a stock which has been separated, called the Local Loans Stock; but the debts of other Governments have come to exceed or to approach the English amount. The Government Debt of France, for instance, is £1,100,000,000, a sum greatly in excess of the present English Debt. Then we have an Austro-Hungarian Debt of nearly £600,000,000; Italian, £520,000,000; Russian, £700,000,000; while there are Debts of £100,000,000 and £200,000,000 owing by quite a number of States, for the most part incurred in comparatively recent years. The English Debt accordingly does not hold the place it did in the general markets for securities, and the amount of foreign issues quoted on the London Stock Exchange alone amounts to about £2,000,000,000.

2. The proportion of the Debt itself to the total securities dealt in has enormously diminished, partly, as has been seen, by the redemption of the Debt, though this redemption, while important with reference to the amount of the Debt, does not seem to be of importance as compared with the growth of other securities, which is the main cause of the change in proportion between the English Debt and those other securities. This change in proportion has already been indicated by the facts stated as to foreign Government Debts and issues. But a fuller statement may be useful. Whereas sixty or seventy years ago the English

Debt amounted to about one-third or one-fourth of the whole capital of the community, it is now perhaps no more than one-twentieth. Whereas formerly it was almost the sole Stock Exchange security, it is now less than one-tenth of the securities quoted on the London Stock Exchange alone. The exact figure of such stocks quoted in the official list of the London Stock Exchange at 31st December, 1898, is stated to be £7,609,000,000, of which, as already mentioned, about £2,000,000,000 are foreign Government issues. In addition, the markets for securities all over the world (in the United States, in Germany, in France, in Austria, in Italy, in Russia, and in our Australian Colonies and South Africa) have increased in even greater proportion; and as they all form practically one market, the relative importance of Consols has greatly diminished. Many securities are dealt in in more markets than one, especially Government securities; but making all deductions for such double entries, one can hardly be wrong in estimating that the figure above stated for issues dealt in on the London Stock Exchange would at least have to be doubled if we were to include the issues upon all the different markets throughout the world. Of this vast mass, English Government securities are clearly a very small percentage indeed.

3. While the mass of the English Government Debt with reference to other securities has thus been diminishing, it is also to be noticed that the amount in the hands of the public has diminished even more than the amount of the Debt itself, and this diminution has been very marked in recent years. This is chiefly the consequence of the investment of savings bank money in Government stocks. The total amount of such savings bank money is now about £180,000,000, all of which must be invested in the English Government Debt, while other amounts of stock are held by other departments of the Government. It would seem that admitting the amount of the English Government

Debt to be £630,000,000 or £670,000,000 including the Local Loans Stock, nearly the whole of it in excess of £400,000,000 is held by the National Debt Commissioners for the savings banks or by other Government departments. The small amount which can be dealt in is shown in another way. The amount of the leading stock, Consols, actually quoted in the Stock Exchange official list is £522,000,000; and if we allow that some part of this amount is held by the savings banks and other Government departments, though their holdings, of course, are not exclusively in Consols, we can easily see that the amount of Consols themselves in the hands of the public is probably not much more than £400,000,000.[1] When it is considered, moreover, that the greater part of this sum is locked up, being held by trustees and other holders who are not in a position to sell, or by banks who are not so limited, but who prefer for various reasons to invest in Consols or keep a portion of the reserve in Consols, and who never sell, it can be quite well understood that the amount of the stock available for actual market purposes is so small as to take from it not merely the predominance but the pre-eminence it once had among securities dealt in on the Stock Exchange.

4. What is equally undoubted is that the stock in the hands of dealers, technically or practically so, has so greatly diminished that now the markets for Consols cannot properly be called a great leading market at all. There is no longer a class of large holders interested in the security constantly ready to buy and sell, and consequently in Consols there is no longer that sort of market which has been described above as a free and natural first-rate market on the Stock Exchange. I am assured that as a matter of fact the number of capitalists constituting the Consol market, and able to engage in large business, has con-

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[1] This is quite confirmed by the last returns as to the holding of Government securities by the different departments of the Government.

spicuously diminished in the last twenty years, till now it is quite obvious that the market is insignificant, to a degree, compared with other markets on the Stock Exchange.

5. The increase of savings bank money has taken place very largely since 1895, when the annual addition to the deposits in the savings banks from being about £4,000,000 to £5,000,000 suddenly went up to over £10,000,000. And this change is coincident with a change in the relative prices of Consols and the leading debenture stocks of railways, apparently indicating that Consols during the last two or three years have been subject to especial influences. A few years ago the 3 per cent. Debenture Stock of the London and North-Western Railway stood at 124, while Consols were at 114. Now the 3 per cent. Debenture Stocks of the London and North-Western Railway are at 111, showing a loss of 13 points, while Consols are about 110, showing a loss of four points only. Consols have thus been sustained by a cause not applicable to first-rate securities generally, and the explanation, no doubt, is the application of the savings bank money to investment in Consols.

As the whole result, we may say that Consols during the last quarter of a century, and especially during the last few years, have lost the characteristics of a first-rate market for securities. They are of less amount in themselves than they were; for various reasons the whole amount is not upon the market at all; and now the market is so small that there is no free dealing in them, such as is necessary for a first-class market. There is, in fact, what one may call a corner in Consols, and as in all corners, the present price is not a real indication of what the market would be when natural conditions are restored.

In the circumstances we may expect, then, that if there are large new issues, this will so alter the general condition of Consols that the premium due to what we may call the present corner must disappear. That premium would seem to be from 5 to 10 per cent. in amount, which may be considered an extra premium not indicating any special credit which the English Government has, but merely the special conditions which have made Consols scarce; when the stocks become abundant again all this premium will disappear, and the price of large new issues will be determined by the circumstances of the issue and the general state of credit. The English Government will still hold a premier position, but it would not be more than a shade better than other first-class borrowers. In the event of a first-class war, in fact, English Government securities stand to lose not merely the 15 per cent. which is likely to occur in all first-class securities, but the extra premium of 5 or 10 per cent. which has come about in consequence of the corner in Consols.

This being the position, what may be considered, apart from Consols, the general level of credit at the present time? I have to submit the following short table, showing the prices of the leading first-class securities:

	Price.
French 3 per cents.	101
German „	90
United States 4 per cents.	130, equal to 3 per cent. at 98
Russian „	100, equal to 3 per cent. at 75
New South Wales 3 per cents.	101
Indian Government 2½ per cents. (gold)	94
Canadian 2½ per cents.	91
Metropolitan „	97
London County Council 2½ per cents.	95
London and North-Western Railway 3 per cent. Debenture Stock	111, equal to 2½ per cent. at 92½
Great Western 2½ per cent. Debenture Stock	92

From these figures we may consider that the general level of credit at the present time is represented by the price of the best 2½ per cent. Railway Debenture Stocks, viz., 92, or, at most, something intermediate between that and the 2½ per cent. stocks of the London County Council, or of the Indian Government, viz., 94 or 95. An easy calculation would thus show that the probable price of the best new issues at 2½ per cent. in the event of a great war, allowing for a 15 per cent. fall, will be something a little over 80, or, say, 85; the corresponding price of the 3 per cent. issue would be over par, but there would, of course, be special difficulties in connection with an issue of stock over par. These would also be about the prices, I believe, at which the English Government could borrow, assuming that the present extra premium on Consols due to artificial causes is 5 or 10 per cent. A reduction of 10 per cent. from the present price of Consols would bring them down to about par, and from that a fall of 15 per cent. would give the price of 85. A good deal will, of course, depend upon the exact amount of the present artificial premium on Consols. But whatever we take it to be, *some* allowance must be made practically for the existence of such a premium when business comes to be done.

It is of little use quoting expert authority in such matters, for experts are not unlikely to differ; but a few weeks ago I happened to obtain the opinion of a gentleman, since deceased, who would be universally recognized in the City as one of the best authorities upon such a point. As it happened, he had also considered the matter very fully. His opinion was that in the event of a great war and of large issues of Consols by the English Government at 2½ per cent., the price would probably be about 80, and the price for three per cents. would be a little over 90. Other authorities seem inclined to think that the prices in the case supposed would be higher than these; but I do not know of any authority who was quite so well qualified as the friend to whom I have referred, or who had so fully entered into all the *pros* and *cons* of the subject.

may call the present corner must disappear. That premium would seem to be from 5 to 10 per cent. in amount, which may be considered an extra premium not indicating any special credit which the English Government has, but merely the special conditions which have made Consols scarce; when the stocks become abundant again all this premium will disappear, and the price of large new issues will be determined by the circumstances of the issue and the general state of credit. The English Government will still hold a premier position, but it would not be more than a shade better than other first-class borrowers. In the event of a first-class war, in fact, English Government securities stand to lose not merely the 15 per cent. which is likely to occur in all first-class securities, but the extra premium of 5 or 10 per cent. which has come about in consequence of the corner in Consols.

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	Price.
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Russian „	100, equal to 3 per cent. at 75
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Indian Government 2½ per cents. (gold)	94
Canadian 2½ per cents.	91
Metropolitan „	97
London County Council 2½ per cents.	95
London and North-Western Railway 3 per cent. Debenture Stock . . .	111, equal to 2½ per cent. at 92½
Great Western 2½ per cent. Debenture Stock	92

From these figures we may consider that the general level of credit at the present time is represented by the and when it was also almost the sole Stock Exchange security, its redemption of course affected credit generally. But now, in comparison with the great forces in the market, the redemption does not seem specially important to the security upon which it is exercised. The redemption is, in fact, for the benefit of all high-class stocks, not specially for the benefit of English Government stocks; and upon this large mass it does not seem to exercise a very great influence.

The gain to us, therefore, from the reduction of debt must apparently be limited to the direct gain; the indirect gain from the effect upon credit generally, or from the effect upon the special credit of the Government not being material. As regards this direct gain, assuming all the payment made for the redemption of debt to be an additional saving of the community which would not otherwise be made, then the country gains about £25,000 annually for every million applied to the payment of debt. The application of a hundred millions would accordingly save to the country annually £2,500,000, which is hardly a perceptible item in the aggregate income of the country. It is about equal to the annual present which sugar bounty countries are alleged to give to our sugar consumers by means of the bounty.

But if the payment is not an additional saving at all, but a transfer from one holder to another, as appears to be the case while so much of the income of the Government is derived from taxes on capital, the question may well arise whether the redemption of debt in present conditions is of any use to the State. The direct gain in the last case is absolutely *nil*. What the Government gains, the community as a whole loses; and so the resources of the State are actually unchanged by the process.

The general effect of this argument is accordingly to show that there is no necessity at the present time for our reducing debt or for accumulating a reserve against emergencies. We seem to gain nothing by the process, because it is one which is not required for its effect upon credit, and the direct gain is quite inappreciable; and it is perhaps doubtful, looking to the nature of our taxation, whether there is any direct gain at all. My own opinion is that it would now be the wisest thing for us to give up any attempt at the reduction of debt, so long at least as the means for paying the debt are really derived from taxes on capital.

I do not, however, put forward the present argument as fully covering the whole question. All that is here claimed is that the usual arguments for the reduction of debt are not what they are supposed to be, and that the whole question requires a great deal of consideration. I hope to return to this subject on an early occasion.

XXII.

SOME ECONOMIC ASPECTS OF THE SOUTH AFRICAN WAR.[1]

THE war in South Africa appears to furnish a good opportunity for studying some of those questions which arise in connection with such disturbances of the economic equilibrium. It stops far short of being one of those great disturbances which sometimes occur, such as the war between North and South in the United States, thirty-five to forty years ago, or such as the war between France and Germany in 1870, when millions of people were involved on both sides, and there was in consequence great stoppage and diversion of industry, continued in the case of the war between North and South for nearly four years. On the other hand, the war is not one of those little wars which are incident to the existence of the British Empire, being unavoidable on the doctrine of chances with an Empire so widely extended as our own, and on so small a scale with reference to the resources of the Empire generally that they pass almost unnoticed in the economic life of the nation. Without being a war of the first kind, involving a great and obvious disturbance of the whole industry of the people, the present war is still on a large enough scale to produce some visible and palpable effects which are the result of war, and it can by no means be spoken of as war with limited liability.

The war then may be looked at from several points of view in its economic relations. First, and not the least important, the circumstances of South Africa itself have to be considered. The war may not be a first-rate affair economically, as far as the British Empire is concerned, but yet it may be of transcendent importance in that respect for the communities of South Africa who are directly involved. Second, the precise effects, as far as the United Kingdom and the Empire are concerned, have to be studied. What is, in fact, the interruption to trade, and what are the temporary and permanent losses sustained? In connection with this, what is the tendency of the war on account of political and other changes that may result in relation to the industry of the country? Third, special consideration has to be given to the finance of the war, and the illustrations supplied by it as to the method of raising loans and new taxes in similar emergencies.

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[1] Written in 1900.

Taking these problems in their order, we have to begin by noticing the extent of the disturbance of industry in South Africa itself. The war has perhaps brought about, as far as the local communities are concerned, a more extensive stoppage of industry in proportion to the whole business done than almost any war on record. The chief industry of the Transvaal was that of gold mining. The gross produce of this industry when the war actually broke out amounted to £20,000,000 sterling per annum, many times the gross produce of all the other industries of the country. This big industry sustained a large community in Johannesburg and on the Rand, comprising a white population of about 60,000 and a black population whose numbers I find difficult to estimate, but probably of at least equal magnitude. The industry again, besides supporting all this population, supplied the means for the expenditure of the Transvaal Government itself, besides large dividends for shareholders, not merely in South Africa and in London, but all over the world. All at once, four-fifths, if not five-sixths, of this industry have been put an end to for the time. Half the white community by which it was carried on have been displaced, and obliged to leave as fugitives the country where they were settled, and to subsist, many of them, upon charity in Natal and the Cape Colony. In proportion to the area affected, then, there could not be a greater disturbance. The war has spelt temporary ruin to many thousands of people, including the most advanced and civilized portion of the population of the Transvaal. There has also been some destruction of capital which will have to be renewed after the war, but not representing any large sum in comparison with the annual product of the industry.

This disturbance, perhaps, has not been an inevitable incident of the war. It was quite possible for the Transvaal Government to permit the Uitlander to live and work in peace, although war was going on. As a matter of fact, however, contrary to their own interest, the governing classes of the Transvaal have not permitted the industry to go on, because they have expelled the only people by whom it could in fact be managed. In any case there would have been some disturbance through the fear of the Uitlander, who distrusted the Transvaal Government in time of peace, and was naturally ten times more apprehensive when war approached, but the Uitlander has not in fact been left to his own fears. He has been forcibly deprived of the means of living by the act of the Government of the Transvaal.

In other respects, in the Transvaal itself, and elsewhere throughout South Africa, there has been no great stoppage of industry. At Kimberley, where the great diamond mining industry is carried on, even the siege did not altogether stop the industry itself, while the usual employment throughout the region, that of pastoral farming, is not one of a kind which war seriously interrupts. The farms lose something by the absence of the farmers themselves who have been called away to the field to fight, but not a great deal in proportion. To these interruptions must be added the interruption of coal mining in Natal and the Cape Colony, and the interruption to business generally in those parts of Cape Colony, Natal, and the Orange Free State, which have been the actual theatre of the concerned, but yet it may be of transcendent importance in that respect for the communities of South Africa who are directly involved. Second, the precise effects, as far as the United Kingdom and the Empire are concerned, have to be studied. What is, in fact, the interruption to trade, and what are the temporary and permanent losses sustained? In connection with this, what is the tendency of the war on account of political and other changes that may result in relation to the industry of the country? Third, special consideration has to be given to the finance of the war, and the illustrations supplied by it as to the method of raising loans and new taxes in similar emergencies.

Taking these problems in their order, we have to begin by noticing the extent of the disturbance of industry in South Africa itself. The war has perhaps brought about, as far as the local communities are concerned, a more extensive stoppage of industry in proportion to the whole business done than almost any war on record. The chief industry of the Transvaal was that of gold mining. The gross produce of this industry when the war actually broke out amounted to £20,000,000 sterling per annum, many times the gross produce of all the other industries of the country. This big industry sustained a large community in Johannesburg and on the Rand, comprising a white population of about 60,000 and a black population whose numbers I find difficult to estimate, but probably of at least equal magnitude. The industry again, besides supporting all this population, supplied the means for the expenditure of the Transvaal Government itself, besides large dividends for shareholders, not merely in South Africa and in London, but all over the world. All at once, four-fifths, if not five-sixths, of this industry have been put an end to for the time. Half the white community by which it was carried on have been displaced, and obliged to leave as fugitives the country where they were settled, and to subsist, result is no new thing in war experience. At the points where opposing armies are in actual contact, the circumstances are inconvenient and injurious to the people in the neighbourhood; but in those other districts forming the base of operations it is not a bad thing for a country to be the seat of war where the troops concerned come from a distance and bring with them a great deal of money to be expended in the country. The position in the Transvaal is not quite the same. In this case there is no introduction of money from abroad to be spent in the country. The people here must be using up their capital and resources generally. But they are probably not much worse off for the present than they were in time of peace, excepting so far as they are affected by the diminution of their share of the income from the gold mines. The male white population is mostly fighting in the army; but even if they had been at home they would not have been adding much to the product of the industry of the country, which goes on very much independently of them—at any rate for a time.

Thus, the war is very far from having been an unmixed loss in an economic sense to the communities of South Africa. The temporary interruption of the gold mining industry of the Transvaal and the minor interruptions of industry elsewhere are made up for very largely to the local communities by the new industry of carrying on the war itself, bringing with it in Cape Colony and Natal a large expenditure by what is really an immigration from abroad. The loss and waste of the war have thus not fallen upon the communities of South Africa as they have fallen elsewhere.[1]

We come *secondly* then to the question of the precise effects of the war as far as the United Kingdom and the Empire are concerned. And the point here is, that while a considerable interruption to trade has to be taken note of, an interruption which would be very serious in its magnitude if measured against the business of South Africa only, yet because of the magnitude of the United Kingdom and the British Empire, against which the interruption has really to be measured, it is hardly sensible. What it comes to, as far as the United Kingdom is concerned, is mainly the stoppage of the labour of the reservists and volunteers who have been called out and who have left the country for service in South Africa. There is no industrial loss, additional to what was going on in time of peace, as far as the services of those soldiers who were with the colours when war broke out are concerned. They are maintained by the country in time of war just as they were maintained in time of peace. The case, however, is different with the reservists and those who have volunteered, numbering about 120,000. They represent so much labour diverted from its usual occupation. Estimating the product of the labour of 120,000 men as worth on the average to themselves and to the community about £80 each per annum, we have a sum of about £10,000,000 sterling annually lost to the community by the diversion of industry which the war occasions. This is not all. It is a fair calculation that for every person actually in the fighting rank, another person in civil occupation is employed in manufacturing implements of war, clothing, saddlery and harness, and other requisites for the field army; and as our field army is altogether about 200,000 men, we must assume that there are 200,000 men in civil employments in this country practically as much engaged in working for the war as if they were in the field army itself. In other words, besides the £10,000,000 which we lose through the abstraction of the people from industrial pursuits to engage in the fighting line itself, we must lose from £16,000,000 to £20,000,000 annually by the abstraction of people from ordinary civil occupations into the business of making things for those who are engaged in the fighting line.

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[1] This was written in 1900, before the extensive interruption to the agricultural industry by the guerilla warfare occurred

This is the economic loss of the war properly so called. What the Government pays is a different thing. What it pays is a payment really from some members of the community to others, many of whom make large profits; and the net loss to the community as a whole must be measured in some such way as has now been applied.

What the final loss will be, then, depends on the length of the war. A year of it will apparently involve a loss of about £30,000,000 to the community, that is a net loss; and if the war continues longer the loss will be much more.

From the point of view of the Government, the position is perhaps more serious. They estimate an expenditure of £60,000,000 for the past and the present financial years, and it is probable that this sum will be exceeded. Very likely the charge may be even £100,000,000 before the present financial year expires, as we have not merely to beat the enemy, but to occupy the country inch by inch. In any case the outlay by the Government must be enormous. It must not be confused with the net loss to the community; but, looked at by itself and from the point of view of the national finances, it seems a formidable figure.

Large as the sum is, however, it cannot be said to be a very formidable one when compared with the resources of the United Kingdom itself. £100,000,000 is about a seventeenth part only of the aggregate annual income of the people of the United Kingdom, and almost an infinitesimal amount compared with the fifteen or sixteen thousand millions at which the wealth of the country is estimated. It is no matter for surprise therefore that the burden of the war seems to be hardly felt at all. Important as the war is for the loss of life it has occasioned, and in other aspects, it is in reality a little war as far as our resources in men and money are concerned.

It seems unnecessary to say anything as to the loss of the war to other parts of the British Empire. The other parts of the Empire outside the United Kingdom and South Africa appear to have supplied about 10,000 soldiers altogether, and they have spent some money in fitting out and equipping these soldiers. The maintenance of these soldiers in the field, however, and the supply of arms and other requisites have substantially fallen upon the United Kingdom, and it may be doubted whether the war has cost anything to the Colonies which have helped us. We are, in fact, providing a fairly good occupation for about 10,000 colonists outside those belonging to South Africa itself, and the Colonies so far really benefit by the war expenditure in the same way that the communities of South Africa benefit by it.

It is, no doubt, in contemplation that South Africa is to furnish an indemnity towards the outlay which we incur by carrying on the war. In this way it may be said the cost of the war, which is incurred in the first instance by the home Government, will be transferred to the communities of South Africa. As a matter of fact, however, the Transvaal indemnity will never be directly paid. When it comes to be settled the money will be supplied by a borrowing operation, and the loss, when it falls ultimately on the communities of South Africa in the shape of the interest payments on the loan, will fall largely on a different people from the present, while the repayments will go to our successors, and not to the generation which has suffered the loss. In this aspect what the Government pays for the war may be said to be an investment of capital which will directly come back to us in time along with all the profits which we shall receive as the result of the peace and prosperity to be established by means of the war.

Some will, perhaps, be surprised at the burden of the war being thus in appearance whittled down. To minimize the evils of war in any fashion may even be regarded as almost criminal. It is necessary, however, to state facts precisely if we are to have clear ideas at all, and if we do so it is beyond question that the economic evils of the war as far as we have gone are not of a very serious kind. The broad reason is, that notwithstanding the importance of the war in many aspects, the burden of it is really small compared with the immense resources of the United Kingdom, while the burden on the South African communities, where the disturbance of industry has been very great, is mitigated in the various ways we have described. As far as the United Kingdom is concerned, the injury may be described as equivalent to what would be caused by a big strike such as we have had in recent years in the coal mining industry and in the engineering industry. In the coal mining strike several years ago, about 200,000 to 300,000 people were engaged, and the industry to that extent was suspended. In the engineering strike, not quite 100,000 engineers struck work, but the numbers really involved and put out of employment directly were considerably greater. We know, however, in how small a degree the product of the general industry of the country was diminished by these events when accounts came to be made up at the end of the year. Similarly now the abstraction of 200,000 to 300,000 people from their usual occupations into direct and indirect military service appears to be lost in the general volume of the national activities. The numbers, large as they are, are not big enough to be missed, and the effect in proportion to the numbers is, perhaps, less than it was in the case of the big strikes referred to, because in these strikes, especially the coal strike, other employments were almost immediately affected through the deficient supply of raw material to work with, whereas in the present case workmen are taken in proportion from great varieties of employments, and there is no stoppage in consequence of the failure of some particular industry to supply its quota of raw material for the others. Apparently, also, the abstraction of workers from active industry is not equal in numerical amount to the numbers of reservists and volunteers who have gone to the front, because there are included in the latter considerable numbers who were more or less unemployed, and they did not therefore form a part of the army of labour proportionate to their numbers.

There remains, however, the final question under this head as to the tendency of the war on account of political and other changes in relation to the industry of the country. A large field of speculation is here opened up. It is quite plain to begin with that the revelation of the country's want of preparation for any considerable military undertaking will lead to the very greatest changes in our military and naval departments at home. The country has been thoroughly alarmed at the necessity which has been imposed upon us of sending all available troops to a distant field like South Africa, so that no reserve is left for any other contingency which may befall. Even greater alarm has been produced by the apparent ignorance of the art of war in high quarters throughout the British army, and the consequent necessity for improvising everything which is necessary to create an army as distinguished from a mob of armed men. In particular, the lack of the best provision in the way of weapons and ammunition and the shortness of supplies of every kind have made a most painful impression. It is therefore undoubted that at the end of the war great reforms must be taken in hand; the numbers of the regular army greatly increased, and everything done which has been so long neglected to make the framework of the army complete and efficient, so that operations can be undertaken at any moment without danger of a breakdown. At the same time measures have obviously become necessary to render more efficient every kind of auxiliary force at home, so that in an emergency the country may not be left without a reserve force for a second unfortunate contingency when we are already deeply engaged. All this means a very considerable addition to the outlay for the army and navy in the next few years of a more or less permanent kind. Estimates vary as to what the addition should be; but I am inclined to think that a very high estimate will not be short of the mark, for two reasons: 1. The necessity for increasing the permanent standing army by 100,000 to 150,000 men, which is rendered unavoidable in part by the state of affairs in South Africa, and in part by the necessity for strengthening our garrisons in Egypt and other places which the defects of our want of preparation in South Africa have made manifest. 2. The evident necessity which has arisen for increasing sensibly the pay of the army all round. At present about 150,000 is the number of the regular establishment, exclusive of India. An addition of £10 per head to the pay of this force alone would come to £1,500,000 per annum; but the additional pay must be given not to 150,000 merely, but probably to 250,000 or 300,000 men at the very time also that preparations are being made for improving the auxiliary forces at home, and that reserves of stores, guns, and ammunition are being prepared on a scale that has not hitherto been thought of. It is hard to see, then, in what way the doubling of the Army Estimates, which just before the war had mounted up to £20,000,000 sterling, can be avoided.

The indirect teaching of the war goes further. It has brought the country face to face with new and unwonted political dangers. The hostility to us of almost every continental people has been revealed, and the nation has felt that in its fight in South Africa it has been fighting not merely the Boers, but the continent of Europe. No continental Government has actually menaced us with intervention; but the will has been there, and our success in South Africa will be bitterly resented. The feeling evidently is in France, in Germany, and in Russia, that England has too much of the world, and that its dominion should be curtailed. Germany and France, moreover, are each of them covetous of some of our possessions for themselves, and Russia at least finds us very much in the way of its own enterprises. The other great world-power, the United States, has also given some encouragement to the idea of intervention on the sentimental ground of and they did not therefore form a part of the army of labour proportionate to their numbers.

There remains, however, the final question under this head as to the tendency of the war on account of political and other changes in relation to the industry of the country. A large field of speculation is here opened up. It is quite plain to begin with that the revelation of the country's want of preparation for any considerable military undertaking will lead to the very greatest changes in our military and naval departments at home. The country has been thoroughly alarmed at the necessity which has been imposed upon us of sending all available troops to a distant field like South Africa, so that no reserve is left for any other contingency which may befall. Even greater alarm has been produced by the apparent ignorance of the art of war in high quarters throughout the British army, and the consequent necessity for improvising everything which is necessary to create an army as distinguished from a mob of armed men. In particular, the lack of the best provision in the way of weapons and ammunition and the shortness of supplies of every kind have made a most painful impression. It is therefore undoubted that at the end of the war great reforms must be taken in hand; the numbers of the regular army greatly increased, and everything done which has been so long neglected to make the framework of the army complete and efficient, so that operations can be undertaken at any moment without danger of a breakdown. At the same time measures have obviously become necessary to render more efficient every kind of auxiliary force at home, so that in an emergency the country may not be left without a reserve force for a second unfortunate contingency when we are already deeply engaged. All this means a very considerable addition to the outlay for the army and navy in the next few years of a more or less permanent kind. Estimates vary as to what the addition should be; but I am inclined to think that a very high estimate will not be short of the mark, for

As regards the Transvaal and the Orange Free State the problem they have had before them has been how to keep in the field an army of from 50,000 to 60,000 men, which they have had to do along with the simultaneous stoppage as we have seen of four-fifths or five-sixths of the chief industry of the country, namely, gold mining. To put such a force in the field anyhow, and at any rate with the completeness of equipment which the Transvaal Government especially appears to have possessed, must have required a considerable financial effort. This may be said, although we are absolutely without information upon one essential point, namely, whether the Transvaal Government gives any pay to the troops, so many of whom have been commandeered. No accounts that I have seen make the smallest reference to this vital point, except one by an ex-banker from Pretoria, dealing in an interesting manner with the economics of the war in the Transvaal; and this gentleman confesses, that as to this point which he had considered, he is unable to say anything. I think we may assume, however, that the Transvaal Government and the Orange Free State Government pay their men who are in the field something in money, besides finding their food and other necessaries. One reason for this opinion is, that a certain proportion of the Transvaal and Orange Free State armies consists of foreign mercenaries and other volunteers who could not be obtained without pay; while it would be clearly difficult, if not impossible, to have some men in the armies paid, and others not paid, especially when those others consist of "burghers" jealous of their rights and privileges, and rather apt to look down upon the mercenaries associated with them. Mention is also made in the reports as to some positions we have captured of the existence of canteens and stores in the Boer camps at which purchases could be made, and of course as purchases cannot be made without money, money must have been in circulation in those camps. In any case, in whatever way the cost is reckoned, the South

African Republic, in order to keep 50,000 to 60,000 men in the field, must be spending at least £100 per man, or say at the rate of £5,000,000 to £6,000,000 sterling per annum. This cannot be done out of the actual revenue of the State, because the gross produce of the one-fifth or one-sixth of the gold mining industry which has been carried on cannot exceed £4,000,000 sterling, and not more than half of this sum would be net profit. Practically there is no other source of revenue available for the Government. And as the Transvaal Government has been unable to borrow, clearly the money which it is spending must be derived in part from the accumulations of previous years and in part from the funds which it has commandeered at and since the outbreak of the war, commandeering being really only another name for forced loans. As the money commandeered at the beginning of the war was not much more than about £1,000,000 sterling, and the net sum gained from working the mines since cannot be much more than another million, it would seem that the money resources of the South African Republics must be approaching exhaustion. It does not follow that these Governments are unable to carry on war, as long at least as they have reserves of ammunition and other stores accumulated before the outbreak; but the approach of exhaustion is certainly a point to be considered. The industrial equipment of the Transvaal and the Orange Free State Republics is not adapted for the maintenance of armies during a long war, and they have not the means with which they can make purchases abroad, even if the things purchased could be readily introduced into the country.

Comparatively little attention has been paid to the financial arrangements of Cape Colony, Natal, and Rhodesia, although these must all be affected by the war. As far as may be necessary these States will of course be financed from home, and an adjustment of liabilities made at the end of the war. The chief change that has been noticed appears to be that the revenue of both Cape Colony and Natal has suffered greatly during the war, as might have been expected. The receipts from import duties have diminished greatly, and the net income from the railways, as far as the general public is concerned, has also diminished, although it remains to be seen whether in the end, when an account is stated, the sums due from the Imperial Government for the use of the railways for war purposes will not more than make good the loss of income to the Colonial Governments from the general use of the railways being diminished.

We come last of all then to the finance of the Imperial Government, as to which one or two questions have arisen, although not of first-rate importance. The war is estimated to cost the Government, as we have seen, rather more than £60,000,000 sterling, this being the addition to the Army and Navy Estimates for the past and the current financial years in excess of charges for the ordinary establishments of army and navy, including some charges which have been incurred in consequence of defects in our equipment which the war has revealed, but the filling up of which is not put down as a war charge. Of this amount it has been arranged to borrow £30,000,000; while the remainder, with the exception of £14,000,000 of additional taxation, has been made good by means of suspending the sinking fund, providing a sum of about £10,000,000 altogether for the two years, and by means of the enormous increase of revenue in excess of budget estimates which has taken place during the last two years. The marvellous ease with which the cost of the war has been borne is thus very striking. More than half the cost is being met out of current revenue, but not half of that half has to be supplied by new taxation.

With regard to the borrowing itself there was much discussion by anticipation as to the best method of borrowing; whether more Consols should be issued, or whether the amount should be obtained by Treasury Bills, or whether a loan repayable at a short date should be tried. The choice has been for the latter expedient, and a loan of £30,000,000 bearing 2¾ per cent. interest, repayable in ten years' time, and issued at 98½, has been the definite outcome of all the discussions. The issue was also very successful, the loan from the first being quoted at about 2 premium, and that price having been maintained for some time, though lately there has been some weakness. The circumstances were such however that almost any method would have been successful, and nothing turns upon small variations in what is substantially an easy task. It may be said also that in spite of the success of the loan and the general favour with which it was received exception may well be taken to the plan of making the whole amount repayable upon a definite date in the future. To fix such a date seems to be rather a departure from sound principle, as no one can tell whether the bill may not come due when it is inconvenient to pay. To have retained the option of repayment from and after ten years would perhaps have been a preferable course. The point, however, is not important to our finances, which are generally so prosperous.

The new taxation has consisted of an addition of 4*d.* in the £ to the income tax, making the rate 1*s.* per £, and also of small additions to the spirits, beer, tobacco, and tea duties. The addition to the income tax is estimated to yield about £8,000,000 sterling annually, or more nearly £9,000,000, the total yield of this tax at a shilling being now upwards of £27,000,000 sterling. The additions to the indirect taxes named again are estimated to yield about £6,000,000, and those two sums of £8,000,000 from direct taxation, and £6,000,000 from indirect, make up £14,000,000, which have been contributed by new taxation to the cost of the war. The money comes in easily enough; but the weak point of the arrangement undoubtedly is that recourse has been had to direct taxation to an excessive extent, and that the additions to indirect taxation, while yielding so little money, have placed the particular duties from which the amount is derived at too high a point. The obvious criticism is that the *cadres* of our indirect taxation are much too limited, and that in a time of real stress our entire fiscal system must be revised, while the issue has been raised as to the necessity of revising the system even in time of peace. In this connection, however, we can only note the question and pass on. The discussion of different systems of taxation can hardly be made incidentally in the course of an article on the economics of the war. If, however, the opinion is well founded that the war must lead to a complete revision of our military and naval methods for defence of the Empire these questions as to the methods of taxation can only be postponed.

There remains finally a question as to the indemnity to be paid by the South African Republics when the war is finished, as we assume it will be, by the complete success of the British arms. What should the indemnity be, and how will it be raised? We have already pointed out that inevitably the financial arrangements for the South African Republics at the close of the war must involve large borrowing, and this will be the case whether the indemnity is large or small. In order to be put upon their legs again the communities of South Africa must borrow largely, not merely to pay an indemnity, but for the purposes of adding the necessary machinery for the mines, permanent way and plant for railways, and other expenditures which are necessary to re-establish and develop their economic position. Their financial circumstances must also be considered with reference to the extent of the military occupation which will be for some time necessary. But these are all questions for the future, and can hardly perhaps be discussed until it is seen in what way the final settlement will shape itself.

To sum up. Our broad conclusions thus are that although the war has caused a great disturbance of local industry, greater in proportion to the industry of the localities which are the seat of war than any similar disturbance upon record, yet the war altogether has not caused any great economic disturbance because it has really been small in proportion to the resources of the British Empire. The disturbance of the local industries again has been compensated, except to the Uitlanders expelled from the Transvaal, by the benefits which the local communities have derived from the expenditure on the war itself in their midst, that expenditure taking place not at their own expense but at the expense of an outside power. The whole circumstances are such as to bring to light and emphasize the enormous strength of modern communities. We are writing thus of a war which involves a contest between from 50,000 to 60,000 men on one side, probably the best militia which has ever appeared in the field for defensive purposes, and about 200,000 men on the other side, by far the largest army which England at any time has put into the field. Our operations in Wellington's Peninsula campaigns, the largest military operations ever before undertaken by a British army, employed not more than from 30,000 to 40,000 English troops, and at Waterloo itself these troops were not more than about 30,000. Both in the Crimea and in India at the Mutiny we had not much more than these numbers of English troops engaged. The present scale of operations is thus beyond precedent in our history; yet we cannot but write as to the expense in the way we have done. All things considered the war is really a small one as far as the resources of the mother-country and the Empire are concerned. The question of questions for the future must undoubtedly be that of our position with reference to the more serious possibilities of defence which the development of other great powers of an essentially military disposition may force upon us before long.

XXIII.

THE RELATIVE GROWTH OF THE COMPONENT PARTS OF THE EMPIRE.[1]

THE object of the present paper is to call attention to the growth of the Empire in detail—to compare the progress in one part with the progress in another, and to make a few comments on the ideas thus suggested. The growth of the Empire in the mass is a familiar idea, but the nature of the growth will be better understood if we also take the different parts by themselves.

For this purpose a few tables have been prepared, and are put in the Appendix. These deal with the area, population, revenue, imports and exports, and other particulars of the main divisions of the Empire in a recent year—1897, where possible—compared with 1871. A still shorter period would have been preferable, as the object is to throw light upon the sort of progress in the Empire that is actually going on; but 1871 to some extent marks a new era, coinciding with the Franco-German War and other events about that time, which have altered greatly all international relations. It is also a census year, and there is no very good date, subsequently, which could have been the starting-point for a comparison. It may be remarked parenthetically that although statistics are made use of, this is not a paper of statistical research. Well-known figures only are used, extracted from such everyday publications as the "Statistical Abstracts for the

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[1] Read at a meeting of the Royal Colonial Institute, February, 1899. For Appendix see Journal of the Institute of that date.

United Kingdom and the Colonies," the "Colonial Office List," and the "Statesman's Year-book." The ordinary figures are simply rearranged under divisions to bring out the main features of the Empire as they appear in a general survey, and to show where, and of what nature, the increase has been.

The Empire, as thus viewed, is a territory of 11,500,000 square miles, or 13,000,000, if we include Egypt and the Soudan, which have been added *pour mémoire* to the Tables; and in this territory there is a population of about 407,000,000, which would be increased to over 420,000,000 if Egypt and the Soudan were included—a population about one-fourth of the whole population of the earth. Of this population again, about 50,000,000 are of English speech and race, the ruling race—in the United Kingdom, in British North America and in Australasia; and the remaining 350,000,000 to 370,000,000 are the various subject races, for the most part in India and Africa, the proportion of the governing to the subject races being thus about one-eighth. (South Africa is an exception, being self-governing, with a white minority in power, but with the black subjects greatly predominating in numbers.)

The increase in area and population in this Empire, again, excluding Egypt and the Soudan, amounts, since 1871, to 2,854,000 square miles of area, or more than one-fourth of the whole, and to 125,000,000 of population, which is also more than one-fourth of the whole. The increase of the ruling race included in this population amounts to about 12,500,000, or about one-fourth of the number in 1897; and the increase in the subject races is 112,000,000, or nearly one-third the numbers in 1897. The increase in these subject races is largely, but by no means exclusively, due to annexation.

The present revenue of the different parts of this Empire added together amounts to £257,653,000, and the imports and exports to £1,375,000,000, not to mention other particulars of an economic nature. The increase since 1871 also amounts to £115,143,000 for revenue, or more than 40 per cent. of the present total, while the increase in imports and exports amounts to £428,000,000, or about one-third of the present total. The latter increase is perhaps greater in appearance than it really is, as all the figures are not reduced to a gold valuation, those for India for instance being in tens of rupees; but it has also to be considered that the gold valuation itself, owing to the increase in the purchasing power of gold since 1871, prevents the real growth of almost any economic factor being fairly shown by values only. The import and export figures are also subject to the observation that the trade of each part of the Empire is largely with other parts of the Empire, so that for some purposes they ought not to be added together. I refer here especially to Australasia, where the totals would be less if the intercolonial trade were to be omitted. But this observation does not affect our present comparisons. The revenue of the self-governing English portions of the Empire also amounts to £145,000,000, having increased £60,000,000 since 1871, and the imports and exports of the same portions to £1,036,000,000, having increased £247,000,000 since 1871. The revenue of the states of subject races also amounts to £112,000,000, having increased £55,000,000 since 1871, and the imports and exports to £338,000,000, having increased £181,000,000 since 1871. What has been said above as to the difference between nominal and real increase applies, however, specially to this separation between the self-governing parts of the Empire and the other portions. The increase in the non-self-governing portions of the Empire would be less by comparison if the gold valuation were uniformly followed.

Such is a very summary account of the tables which thus bring out the proportion of the British race in the Empire to the subject races and states, and the relative rate of increase, which is on the whole, on account largely of recent annexations, rather greater among the subject races and states than in the English portions. There are, however, many other points to be noticed, including the different rates of growth of the different portions of the white and the subject races respectively.

The division of the tables, it will be observed, is into seven groups. The first three are the United Kingdom, British North America, and Australasia, which constitute the English-speaking self-governing portions of the Empire. Next comes (4) Southern Africa in a group by itself, which is generally placed along with the portions of the Empire consisting of subject races, but which is really of a mixed character, being self-governing politically but peopled for the most part by coloured races among whom the white population is only a small minority. Next we have (5) the other portions of the main land of Africa belonging to the Empire, (6) India, and (7) the miscellaneous possessions of the Empire, which are further classed in seven subdivisions, according to their geographical situation, and which, with the exception of one or two detached positions, comprise a coloured population. The effect of this arrangement is that the Empire appears to consist mainly of three English-speaking portions—the United Kingdom, British North America, and Australasia; of one mixed portion, as yet small in population, the Colonies and territories in South Africa; and of three other portions where we have subject races to deal with and only a small white population, the Empire in Africa, the Empire in India, and the various miscellaneous possessions all over the world. We begin with an account of the relative rate of progress in the English-speaking portions of the Empire.

As to population in these English-speaking portions we have the following comparison, there having been no change here in the area since 1871:

Population of United Kingdom, British North America, and Australasia in 1871 *and* 1897 *compared.*
[In millions.]

	1871.	1897.	Increase.	
			Amount.	Per cent.
United Kingdom	31.85	40.20	8.35	26
British North America	3.84	5.40	1.56	41
Australasia	1.98	4.48	2.50	126
Totals	37.67	50.08	12.41	33

The percentage increase in the United Kingdom is thus much smaller than in the two great groups of English-speaking Colonies. It is only 26 per cent., whereas in North America it is 41 per cent., and in Australasia it is no less than 126 per cent. in little more than a quarter of a century. It is Australasia, therefore, which has been going ahead among the English portions of the Empire. In amount, however, the increase of population is still much larger in the United Kingdom than in the other two parts of the Empire, the numbers added there being 8,350,000 as compared with 1,560,000 only in British North America and 2,500,000 in Australasia. Relatively also the United Kingdom remains predominant, the numbers of the people there being 40,000,000 out of a total of 50,000,000.

A similar comparison as to revenue gives the following results:

Revenue of United Kingdom, British North America, and Australasia in 1871 *and* 1897 *compared.*
[In millions sterling.]

	1871.	1897.	Increase.	
			Amount.	Per cent.
United Kingdom	69.9	106.6	36.7	52
British North America	4.4	8.1	3.7	86
Australasia	11.7	30.9	19.2	165
Totals	86.0	145.6	59.6	69

The increase of revenue is thus in all cases greater than the increase of population, but the same relative position is maintained by the three different portions of the Empire. The percentage increase is again greater in British North America and Australasia than in the United Kingdom, but the amount of the increase is much the largest in the United Kingdom. The comparison is subject to the observations that new taxes may have been imposed in the interval in different degrees, and that on a very strict comparison changes in the form of the accounts may have to be allowed for, the figures on the surface thus requiring rectification. But these are niceties which can hardly be followed up in so general a comparison: the broad conclusions do not seem to be affected.

Next we have a comparison of imports and exports:

Imports and exports of United Kingdom, British North America, and Australasia in 1871 *and* 1897 *compared.*

[In millions sterling.]

	1871.	1897.	Increase.	
			Amount.	Per cent.
United Kingdom	686	843	157	23
British North America	38	55	17	45
Australasia	65	138	73	112
Totals	789	1,036	247	31

Here again the increase is larger in percentage in British North America and Australasia than in the United Kingdom, but the amount of the increase is much the largest in the United Kingdom, while the aggregate foreign trade of the United Kingdom is four-fifths of the total. The percentage increase is also largest in Australasia, corresponding to the increase of population.

It is unnecessary to carry the comparison through the other factors mentioned in the tables, although it would be of obvious interest to contrast the reduction of debt in the United Kingdom with the increase in the Colonies, and to bring out similar points. The general character of the growth is sufficiently indicated by the facts stated. The Colonies progress at a greater rate than the Mother Country, as their increase of population is greater, this increase being specially manifest in Australasia; but the growth in the United Kingdom in amount is still much the largest, and, in such a matter as the increase or reduction of debt, the comparison is rather to the advantage of the Mother Country, though there need be no question of the necessity and usefulness of the borrowing itself.

A similar set of tables for the subject states of the Empire, including South Africa for the sake of convenience, would give the following results:

Population in subject states in the British Empire in 1871 *and* 1897 *compared.*

[In millions.]

	1871.	1897.	Increase.	
			Amount.	Per cent.
South Africa	1.0	3.75	2.75	275
Other parts of Africa . .	0.54	33.69	33.15	—
India	238.60	311.50	72.90	31
Miscellaneous Possessions	4.64	8.39	3.75	81
Totals	244.78	357.33	112.55	46

Revenue of subject states in British Empire in 1871 *and* 1897 *compared.*

[In millions sterling.]

	1871.	1897.	Increase.	
			Amount.	Per cent.
South Africa	0.9	9.7	8.7	910
Other parts of Africa . .	0.2	0.8	0.6	370
India	51.4	94.1	42.7	83
Miscellaneous Possessions	3.9	7.2	3.3	84
Totals	56.4	111.8	55.3	98

Imports and exports of subject states in British Empire in 1871 *and* 1897 *compared.*

[In millions sterling.]

	1871.	1897.	Increase.	
			Amount.	Per cent.
South Africa	7.7	47.2	39.5	513
Other parts of Africa . .	2.5	10.8	8.3	332
India	97.5	198.9	101.4	104
Miscellaneous Possessions	49.5	81.2	31.7	64
Totals	157.2	338.1	180.9	115

The broad facts here are that the increases, with the exception of the "miscellaneous possessions," are greater than in the English-speaking portions of the Empire. The percentages and amounts of increase are both very large, and speak for themselves. This is no doubt explained, as already mentioned, by the increase of the Empire through annexation; but some other changes are also significant. Attention may be drawn to the following points:

1. The great increase in South Africa. The increase in population shows a very large percentage, but the numbers are still small, about 3,000,000 only. In this portion of the Empire, however, although the population is only mixed, the increase of revenue and of imports and exports is larger in proportion than anywhere else, and the totals are significant. The revenue from being less than a million in 1871 is now about £10,000,000, an increase of over 900 per cent., and the imports and exports, including bullion and specie, from being just under £8,000,000 in 1871 are now £47,000,000. Of course, we must beware of putting too much stress upon such figures when we compare them with others. The imports and exports, we may suppose, are swollen in part by a portion of what is really transit trade of the Orange Free State and the

Transvaal. But, making all deductions, large figures would still be left. Economically, also, the Orange Free State and the Transvaal are a part of South Africa, developed largely by British capital and enterprise, and British settlers. We should get still larger figures of revenue and of imports and exports if we were to include them, and not much larger figures of population. This great advance of South Africa is one of the main features which are shown by the general comparison we have been making.

2. The remarkable growth of India. The figures here comprise the whole population of India, including the native states, as to all intents and purposes they form part of the Empire. The magnitude of the increase of population will not fail to strike the most inattentive. There are now more than 300,000,000 of people for whose government we are responsible in India; and of these, 73,000,000 have been added, mainly by the ordinary growth of population, since 1871. One is almost staggered by such figures, especially when it is remembered that the resources hardly grow in proportion, and that there are many millions in this vast multitude in a state of the extremest poverty.

At first sight the figures of the growth of revenue and growth of imports and exports in India appear to signify a growth of resources in much larger proportion than population; but unfortunately this conclusion cannot be accepted, owing to the explanation already given as to the figures not being reduced to a gold valuation. Were the gold valuation applied to the later years the apparent increase both of revenue and of imports and exports would be less than it is. What better figure could be substituted it is not so easy to say. The increase in other parts of the Empire may be less than would have been the case if they had not had the gold valuation. Without going into such niceties, it may be sufficient to note that the apparent growth in the revenue, and in the imports and exports of India, is not to be taken literally, especially in a comparison with other parts of the Empire.

3. The comparative smallness of our miscellaneous possessions, the scattered possessions we hold all over the world exclusive of the main divisions already described, and the want of progress shown in some of them by comparison. All told, the long list of small possessions enumerated in group 7 only gives a population of not quite 8,500,000, and if we were to exclude Ceylon, which ought perhaps to be included with India, the population would be almost exactly 5,000,000, or about an eightieth part only of the whole Empire. Although in the group generally there is remarkable increase since 1871 —81 per cent. in population, 84 per cent. in revenue, and 64 per cent. in imports and exports—we have to consider that we are here dealing with small amounts only, and not with the large figures of other parts of the Empire. The figures of the imports and exports would, however, be larger than they are if the imports and exports of such places as Hong Kong, Gibraltar, and Malta, whose trade is a depôt and transit trade, could be properly dealt with for such a comparison as the present.

In spite of the general increase in the group also, we have to note one or two unfavourable symptoms among the older Colonies. I refer especially to the subdivision (*c*) of group 7, and principally the West Indian Islands and British Guiana. In this group there is a large percentage increase of population amounting to 45 per cent.; the revenue also shows an increase amounting to 56 per cent.; but when we turn to the imports and exports we find the increase in the imports to be 7 per cent. only, and that there is an actual decrease in the exports of 14 per cent. In British Guiana there is a decrease of 32 per cent. in the imports and of 35 per cent. in the exports. These figures tell their own tale, which is confirmed by the figures as to growth of debt and other particulars. This is almost the one unfavourable feature in the picture of general progress in the British Empire which the statistics present to us.

4. The addition of an African Empire. In most of the figures to-night we have had to deal mainly with the progress of population on the same area or with small additions to the area. In the English-speaking portions of the Empire this is conspicuously the case. It is also for the most part the same in India and other parts of the Empire, with the single exception of the African Continent. Here, on the contrary, whether in South Africa, or Central and North Africa or West Africa, or Egypt and the Soudan, we have to deal for, the most part with new areas added to our responsibilities, the whole constituting already an area of about 3,000,000 square miles, with an estimated population of 34,000,000 if we exclude Egypt and the Soudan, and an area of over 4,000,000 square miles with a population of 50,000,000 if we include the latter. The African Empire thus begun is no small rival to the Indian Empire itself. The India we possessed at the beginning of the century was not much greater in population, I think, than the population we already govern in Africa, while the conditions are such that the growth of population in our African dominions, considering what the population has been in former times in the Soudan, is likely to be extremely rapid. The nucleus of this Empire in revenue and trade, looking at Egypt on the one side, and South Africa on the other, as well as at West Africa, is also considerable. When the events of the present generation pass into history the magnitude of the achievement will become even more evident than it is now. We can hardly realize as yet the responsibilities and possibilities involved, or how much the change affects our general position in the world.

This general survey of progress in the last quarter of a century leaves no doubt on one point at least—the interest and picturesqueness of the progress of the

Empire. Whether we look at the varying developments in the purely English parts of the Empire, the magnitude of the growth at home, the increase at a greater rate in British North America, or the increase at a greater rate still in Australasia; or at such a phenomenon as the rapid development of South Africa where the white races are actual colonists in association with the subject races; or at the vast growth of India; or at the beginning of a new Empire in Africa; or at the special incidents not so favourable which are happening to our older possessions in the West Indies; to which we may add the latest development of all in the Klondike, of which we had so striking an account from Miss Shaw a fortnight ago, but which is so new a development that the figures for British North America are not yet affected as those of South Africa have been —we find ourselves in possession of an Empire in which a great deal is happening, and with which the fortunes of the human race itself are very largely concerned. In whatever way such an Empire has come to exist, the influence it must have on the various peoples, and especially on those who have anything to do with the government or with the administration of large affairs must be enormous; and on the whole, we must assume, beneficial, clearing the mind of prejudices and narrow bias of every sort, and proving to all how much such an Empire must be self-developing because no single mind could pretend to mould so vast an organism. It is an education of itself to belong to such an Empire, and to help, in however small a degree, in carrying out the common work.

One or two special questions cannot but be suggested. The first of all is involved in the division between the English parts of the Empire and the states of subject race on which I have insisted. Is the central force of the Empire, the power to hold it together, increasing as rapidly as the Empire generally? The question of force is unavoidable in dealing with such a problem, and it would be a serious matter if the Empire were to be increasing beyond the force of the race by which it is held together.

The figures we have had to-night, however, supply the answer. The increase of the Empire in population altogether has been 44 per cent., and would be a little more if we included Egypt and the Soudan; and the increase in the English parts of the Empire is 33 per cent. Numerically this implies a growth of the subject populations generally in excess of the growth of the governing race. On the other side, however, has to be reckoned the enormous growth of the governing race in resources. The increase of revenue and of business, apart from annexations, is most remarkable, in reality, in the English portions of the Empire; and if we were to go more into detail, and include such elements as the growth of the shipping fleet of the Empire, this relative growth of the English portions of the Empire would be still more remarkable. Apart also from the special additions to the Empire by way of annexation, the growth of the governing race appears to keep pace with that of the subject races. Large as is the growth of population in India, the most important part of our subject Empire, the percentage increase is only 31 per cent., which includes a certain amount of annexation, while the percentage increase in the governing races without any annexation is 33 per cent. Looking at all the probabilities we may consider it fairly certain that this relative growth will continue. The proportion of the governing race to the subject races, barring annexations, will rather increase than diminish.

The serious fact in this question of force to hold the Empire together is, however, not the internal position, but the position of the Empire with reference to other nations, on which, perhaps, one may be allowed to say a word. Very great changes have been occurring in the world outside our Empire, as well as within the Empire itself, and our position may be thereby affected, although we are stronger internally than before.

In one respect we are clearly better off than before. The great competitor we had at the beginning of the century and have had until recent years is France. At the beginning of the century, apart from the additions made to it by the Napoleonic wars, France was a State of about 26,000,000 of people, occupying the most fertile territory in Europe, and well advanced in arts and manufactures. This was our rival at a time when we had virtually a population of 11,000,000 only, that being the population of Great Britain when Ireland was still a serious burden and in no way a help. Now the population in France is very much the same as the population of the United Kingdom, and we have all the white population in other parts of the Empire to the good. Thus, from being a state of less than half the population of France we have become a state very much superior in the numbers of population.

The development of our resources has also been much more rapid than that of France, so that altogether the change in our relative positions, materially speaking, is something enormous. As far as rivalry with France is concerned, therefore, our position in the world is much better for holding a Colonial Empire than it was in the past times of our history.

The changes that are going on from day to day and from year to year are also to our advantage. While France has very much the same white population now that it had twenty or twenty-five years ago, there has been in the same time an addition, as we have seen, of nearly 12,000,000, or more than one-fourth of the population of France itself, to the white population of our Empire. The next twenty or twenty-five years in all probability will witness a similar difference in our favour.

France at the same time has not strengthened but weakened itself by the addition of a vast Empire of subject races, especially in Africa, without a good self-governing or self-supporting possession amongst them. With a stationary white population she takes on herself the burden of a large Empire.

But, while our position relatively to France appears to have thus changed enormously to our advantage, we have further to consider that whereas at the beginning of the century, and even as late as twenty-five years ago, we had no rivals in the business of colonizing or of over-sea Empire, the position is now altogether changed. One of the greatest changes is made by the rise of the German Empire and its recent disposition to go into the business of colonizing and holding possessions abroad. Germany, from being an aggregate of divided states with a population of less than 20,000,000 at the beginning of the century and with no prospects of colonial ambitions, has now become a united empire with a population of between 50,000,000 and 60,000,000, nearly one-third of which population has been added to it by the natural increase arising from the excess of births over deaths during the last twenty-five years. If, then, we have gone ahead of France, it is to find at the end of the term that a new power has arisen with which we may have to deal, and a power more formidable than France.

Russia, in the same way, which was almost out of the reckoning as a world-power at the beginning of the century, and which, even twenty-five years ago, was hardly in a position to interfere with us in any part of the world, has developed very rapidly by means of its railway extensions and otherwise, and is now a great power with a growing population touching the British Empire in India and touching our interests in China and elsewhere. This power also has a population of 130,000,000, mainly a white population, and the addition to the numbers since 1870 appears, from the official statistics, to be close on 60,000,000, an enormous increase if we consider it to arise mainly from the natural increase of population and not from annexation. Possibly part of the increase is apparent, being explained by the improvement in the method of taking the census; but there is no doubt as to a huge increase. I should not consider the growth of

Russia to be of so serious a nature in many respects as the growth of Germany, because Germany is much more advanced educationally and otherwise than Russia; but the people of Russia have of late years gone largely into industrial and manufacturing pursuits, and, if this internal development goes on, as it seems likely to do, a rapid increase in the material force of Russia and in its mobility for purposes of external action is to be looked for.

Lastly, we have to consider the United States, where the increase of population has been so remarkable for more than a century, and where the development of industrial and manufacturing power internally has also been greater than any similar development that has ever been witnessed. This state too has just within the past year definitely adopted a policy which brings it into action as a colonizing power. The population of the United States, mainly a population of the same character as the white population of the British Empire itself, is, moreover, between 70,000,000 and 80,000,000, or much greater than the white population of the British Empire, increasing also at rather a more rapid rate.

The general effect, then, is that while we held our Colonial Empire in former times with no other rival than that of France capable of challenging our possessions, we have now France in a position of inferiority as compared with what it was, but at the same time we have three other powers—Germany, Russia, and the United States—who may also have to be reckoned with. Externally, then, our position is somewhat different from what it has been in former times.

As the net result I do not believe that, for the present at least, the British Empire is in any real danger. Each power with whom we have to deal has its own difficulties, and a coalition of powers seems unlikely in the last degree, their interests being so entirely different. At the same time, all of them, excepting perhaps Germany, have for the present a large amount of internal organization to undertake. The Colonial Empire of France, for instance, is by comparison almost entirely undeveloped. Russia has still an enormous amount of work to do to fill up decently the huge vacant places within its ring-fence, and which are capable of being filled by white population. The United States, again, are just beginning their colonial policy, and have a serious work before them to adapt their Constitution to the new conditions imposed by such a policy. Still the condition of our Empire, looking at the existence of all these powers, is seriously different from what it has been, and the next two or three generations will have much to do in adjusting our relations with co-ordinate powers.

Another question suggested by a review of the Empire is the economic one presented by a state like India, which has an enormous growth of population mainly dependent on agriculture, and where there are some signs of an excessive growth of multitudes who have barely the means for the scanty subsistence which is aimed at and who are always on the verge of starvation. Amidst our great success in the development of population and wealth throughout the Empire, in which there is so much cause for pride and rejoicing, the reverse of the shield which we find to exist in the growth at the same time of a vast population on the verge of starvation ought also to be looked at. It appears to be the one great economic difficulty which the governing races will have to deal with, and which is beginning to embarrass them. In assuming an Empire like that we have taken upon ourselves in Africa we do not know whether we may not have enormously added to such embarrassments, which consist at bottom in the fact that it is comparatively easy to produce a *Pax Britannica* in the regions we undertake to govern, and thereby promote a huge growth of population by the removal of what Malthus called the preventive checks; but it is quite another thing to secure a more rapid increase of the means of subsistence than the increase of the population itself such as has been secured in the English portions of the Empire. The moral is that our position as a governing race remains not altogether satisfactory so long as we have not created such life and energy in the subject races that an improvement in quality and power of production per head may accompany the increase of numbers. In India such an improvement has taken place among many classes of the native community. But it is not quite universal, and it does not go deep enough down among the lower classes. Something more is wanted, and we should not despair of that something more being added, if the governing races have it made clear to them how vital and urgent the problem may become for the general welfare of the Empire. A natural flow of capital to India and other parts of the Empire for purposes of internal development, and the cultivation of a capacity to use capital among the native races themselves, are, in fact, indispensable if the Empire is to prosper. As yet on this head the progress we have made is far from what it should be.

The constitutional changes which the growth of the Empire must render necessary, make another question suggested by such a review as we have taken to-night. Although force is not wanting to keep the Empire together, the drain upon the energies of the Parliament and Cabinet at Westminster increases with all the vast growth of population and resources. Already we have two ministers, the Secretary of State for India and the Secretary of State for the Colonies, occupied with the affairs of our possessions abroad, and the departments which these ministers attend to have long been increasing. The Foreign Minister has also been entangled in Egypt and elsewhere with what is in fact Colonial administration. It is quite on the cards, I should say, that before long we may have a separate Secretary of State for Africa, or for a part of it like South Africa, so urgent and absorbing may become the administration of what is really another India. All this will also make an additional claim on the energies of an overworked Parliament. Some considerable change must accordingly take place in order to relieve the central Government, the business of administration being reduced to a system, and the review of Parliament being applied in a more systematic way. With this is connected the more general problem of the federation of the Empire, by which the self-governing Colonies would share the responsibilities of Empire with the Mother Country—a problem, however, which is now so familiar that it need only be mentioned in passing as clearly suggested by the review we have had before us. The announcement just made of the success achieved in promoting the Federation of the Australian Colonies is of good omen for the larger Confederation of the Empire to which we must look forward.

The practical issue to which these considerations lead is the necessity for all agreeing to make the most of the Empire in the way of development and organization. I speak as one having so great a sense of the difficulties and dangers of a great Empire that if there had been free choice in the matter at any time I should have deprecated the conquest of India and other conquests which have made the Empire what it is. But the choice has not been quite free, and especially it is not open to us to give up any part of the Empire at will without making so great an alteration of our position in the world that our freedom and independence at home would be endangered. As the worst thing possible is to halt between two opinions, we must accordingly, even if we dislike Empire, make the best of our position. We are in for this great Empire, and there is an end of the matter. On all sides then, on little Englanders as well as great Englanders, the main idea of policy should now be to knit the different parts of the Empire together so that they should support each other and support the whole. There must be a common scheme of defence; there must be a provision of adequate force in each part of the Empire according to that scheme; communications must be rapidly improved. It would be out of place for me to suggest or discuss any detailed scheme, but perhaps the study of the composition of the Empire in the most general way, and of what the growth has been, may assist the public comprehension of the plans which those who are responsible produce.

[NOTE.—Since this paper was written the Empire has been enlarged by the annexation of the Transvaal and the Orange River colonies; but important as these acquisitions are the total figures would not consequently require much change. The resulting addition to the population, especially the white population, of the Empire, forms but a small percentage of the totals here dealt with; while the import and export figures are mostly included in those of Natal and Cape of Good Hope, through which the trade passed as above explained. We are still waiting for an Imperial scheme of defence as suggested at the close of the paper.—1904.]

XXIV.

THE STANDARD OF STRENGTH FOR OUR ARMY; A BUSINESS ESTIMATE.[1]

ONE of the difficulties of the discussions on Army Reform is how to make a bridge between the experts and the public whose support is invited by reformers. As regards the Navy, the public have been impressed by the idea that our Navy must equal in apparent magnitude the navies of any other two Powers. This idea is of course imperfect, as it may be necessary to have a navy equal to those of any other three or four Powers, and as it is also obvious that apparent may be a very different thing from real magnitude, and the public are not good judges on the point. The idea serves, nevertheless, as a pivot of discussion, and gives the public something tangible to go for. As regards the Army, however, there is nothing analogous. Should we have an army equal to a third or a fourth or any other proportion of the army of any one of the great military Powers; and if so, which? or should we have an army on the scale of one of the military Powers themselves? or should we have the magnitude of our Army fixed in some totally different way? There is the farther difficulty as to the magnitude of the army required on a peace footing and on a war footing respectively. This difficulty does not seem to exist as regards the great military Powers which are free from little wars, and whose armies are always potentially convertible from a peace to a war footing in so short an interval as to make the war footing the only one of real importance to be considered. But it is an unavoidable difficulty as regards the English Army, whose peace duties include little wars which are almost annual in their occurrence, and a constant state of preparedness for such wars. In what way, then, is a standard for the English Army to be arrived at, first on a peace footing, and next on a partial or full war footing, and what is the interval of time to be contemplated in arriving at the latter condition either in part or fully? It is to further an understanding on some of these points between the experts and the public that the present paper is written.

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[1] From the "Nineteenth Century" of 1901.

The starting-point of the discussion must, of course, be the preponderance of the Navy. The condition of the British Empire without command of the sea is hardly conceivable. We should then be at the mercy of any Power which had such command. Our communications could not be maintained. We should be liable to blockade at home and to the ruin of our foreign commerce, nor could we keep India or any other dependency by force. We should be no worse off perhaps than Holland, which is in no condition to defend its independence or its empire against neighbouring States; but the condition of Holland is obviously, for many reasons, not a desirable one, while it may be doubted whether small States like Holland would be so numerous and prosperous as they are if there were not Powers like England capable of maintaining public international law against freebooting Powers. We start, then, with the idea of an army to be used in conjunction with a preponderant navy. What are the purposes for which such an army is required, and what numbers are needed first on a peace and then on a war footing?

The *first* use of an army is for purposes of defence against internal commotion. This statement may surprise some people who think of police only when questions of internal order are concerned and have not for many years witnessed the soldier in evidence in civil commotion or insurrection. But we shall have no true idea of what armies exist for unless we begin with this, perhaps in importance the highest, function of an army. The ultimate guarantee of civil order is, in fact, the soldier. The unarmed policeman is nothing without him, and no one can foresee how necessary the soldier may at any moment become. We have a standing illustration in the case of Ireland, where a police force is maintained which is really a military force, and with a large number of Regular soldiers behind it. Another illustration is just being given in South Africa, where the new police force is really being armed and organized as a military body with Regular forces behind it. An illustration of a different kind was afforded by the great civil war in America. If the United States had been able to dispose at the beginning of the war of a Regular army of 100,000 or even 50,000 men, there would have been no civil war. The losses and miseries of four years' civil strife, with its enormous waste of human lives, would have been entirely prevented. It is not cheap for a nation, therefore, even on the score of internal policy, to be without an irresistible army for all purposes of home defence. I put down, then, as the first object of an army, the maintenance of civil order in the State.

There is a special reason for mentioning this, as it is not unconnected with the problem or ideal of a general disarmament, of which one hears so much. The problem is quite insoluble, for the simple reason, among others, that internal conditions are everywhere different. Having regard to their own home conditions, the most orderly and law-abiding peoples might perhaps disarm completely, or nearly so, though the danger of so doing, as we have seen, was only too strongly illustrated in the United States. But if they disarm they are immediately at a disadvantage internationally in dealing with States which are obliged by internal necessities to maintain large armies—States like France, or Austria-Hungary, or Russia, and many others. Thus the existence of

States liable to internal disorder and which must maintain large armies initiates a competition in arming internationally which there is no means of getting rid of. We are saved from the international competition, or think we are saved, by a preponderant Navy; but we must not deplore the fact itself as if it were altogether preventible. I doubt if we can say that the expense of the additional armaments undertaken by some Governments beyond what is necessary for internal defence is in actual conditions a great or serious burden.

The *second* object of an army in an empire like that of England appears to be the garrisoning of the mother country so as to prevent raids upon fortified positions or depôts or commercial centres, or even raids of a wider range, at the outbreak of a war, and in the interval which may elapse before our preponderance at sea is converted into overwhelming superiority in fact by the defeat and destruction of the enemy's fleets. What kind of raid we should be prepared against, assuming our actual preponderance at sea, is of course a question of detail; but judging by the experience of history, and allowing for the greater mobility now given by steam as compared with the facility of movement formerly, I should say that we ought always to have in view in a great war with a naval Power the possibility of a descent of 20,000 or 30,000 men upon Ireland—in a war, for instance, between us and a Power like France, which has numberless soldiers and a considerable fleet at its disposal. Up to the limit stated, the launching against us of an expeditionary force which is prepared to face the prospect of being cut off or blockaded, for the sake of striking a serious blow and shaking the nerve of the English Government, seems always possible by way of surprise even without command of the sea by our enemy. Perhaps twenty large ships altogether, perhaps ten only, would suffice for the whole expedition, which might save bulky transport, for instance, by relying for a beginning of success on assistance in the shape of transport to be obtained in Ireland itself.[1] A similar expedition might suffice to punish any weakness of which we might be guilty in leaving places like Woolwich or Chatham or Portsmouth or any other of our stations insufficiently protected by land. The expeditionary force would know it was only sent on a forlorn hope, with almost the certainty of its being cut off; but that would not weigh, probably, with the Government sending it, if great destruction and loss were meanwhile effected. The calculation might also be that our preponderance at sea would not, in fact, be converted into overwhelming superiority—everything is doubtful in war until actual experiment is made—and then an expedition of this sort, properly aimed, might assist the enemy largely in the main contest itself. The army at home, as wars may break out suddenly, must therefore always be prepared to meet raids of considerable magnitude, and not merely to defeat them in the end, but to make them so difficult that they will not even begin to succeed.

The *third* object for which an army is required is the garrisoning of the positions necessary to the Empire abroad, the garrisoning of places like Malta, Gibraltar, and Aden, necessary as fortified naval depôts and coaling stations, and the garrisoning of dependencies like India, Egypt, and South Africa both against internal tumults and raids from the outside. We are responsible for defending our Empire abroad as well as for home defence; and although we are here assisted by various local resources the organizing of Imperial defence generally rests with the mother country, which must also very largely supply white troops from home, if it does not always pay for them. The remarks applicable to the possibility of a raid upon our home defences appear to be applicable here. Vital coaling stations may be assailed by small expeditionary forces landed for the purpose, as well as attacked by sea, with the additional temptation, hardly present in the case of an expedition to the United Kingdom itself, that the force may be able to get away safely after performing its work of destruction. The ambition of foreign Powers may fly at even higher game. If an expeditionary force, notwithstanding our preponderant Navy, may effect a landing by surprise in Ireland or even in Great Britain itself, a similar force apparently might be landed in Egypt or South Africa, or some other vulnerable part of our wide Empire, by a Power like France or Germany. The threat of a number of attempts may withdraw the fleet and ships we could oppose from the quarter where the real surprise may be tried. Curiously enough, history itself supplies the record of a landing by surprise on the part of the French in Egypt at a time when the English fleet was preponderant in the Mediterranean and when Nelson was on the look-out for the French expedition. What has happened before may happen again, and the change made since Nelson's time by the substitution of steamers for sailing ships appears all in favour of the possibility of surprise. A foreign surprise of this sort may appear even more tempting to an enemy than a raid upon Ireland or Great Britain. The temporary possession of Egypt by an enemy would upset all our arrangements for Imperial defence generally, and the calculation would be that much might happen before we were in a position to send another expedition to Egypt to restore our power. It was nearly two years after the French landed in Egypt in 1799 before we were able to land a force to dispossess them. But whether in Egypt or elsewhere, our widely scattered Empire is clearly liable to surprise at some point, and the surprise may be serious if we have not at all necessary points suitable and adequate garrisons. The provision of such garrisons, then, is one of the main duties of an English army in time of peace.

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[1] Some of the transports in the South African war carried 3,000 men each over ten times the distance which would have to be traversed by a French expedition to Ireland.

I have spoken only of the possibility of raids by sea, as that is the main matter, having regard to the position of the great military Powers who may be our enemies. But of course there is a possibility of raids by land as well, as our Indian experience tells us. Happily, the enemies who may raid us by land at any point are mostly insignificant, but the possibilities are not to be altogether overlooked. They reinforce *pro tanto* the necessity for strong garrisons at all vulnerable points in time of peace.

The *fourth* object for which an army is required appears to be to repel a possible invasion at home—not a mere raid only, but a serious invasion. The opinion is sometimes expressed, and there is a great deal of force in it, that we have hardly to concern ourselves with a serious invasion, as the loss of command of the sea which would render invasion possible would mean our complete destruction as a Power, without the necessity of invasion at all. We should then be liable to blockade, and a strict blockade would mean our ruin. After much consideration, I have come to the conclusion that a condition of things might arise in which a strict blockade would not follow the defeat of our battle fleets at sea, and invasion might be resorted to instead by the successful enemy. The reason is that even after our battle fleets were defeated, supposing that to happen, the blockade of the English coasts by hostile fleets would be a tedious and difficult matter, requiring many ships of a miscellaneous character as well as battleships, which we could probably make a fight against, with our natural maritime superiority, for months and even years, until we were able to challenge once more the enemy's battleships. It might be the case of our fighting an Armada over again. But, while blockade would be difficult or impossible for an enemy, it is not inconceivable that if they had overcome our battle fleets they would be able to command the narrow seas sufficiently to convoy transports bringing enormous forces for the invasion of the country. We might thus be brought in contact on our own soil with the legions of continental Powers. What operations would be possible for an enemy in such circumstances need not be discussed in detail, but the possibility of even two or three hundred thousand men being thrown on our shores in a short time, and kept reinforced, appears not altogether outrageous in the conditions stated. If we are to recover, then, we must be able to defend our home citadel by land, pending the preparation of new fleets.

The *fifth* object we have to keep in view is the possibility of a formidable attack on some part of our Empire by land, which we shall have to meet with large military force. We think of India mostly in such a connection, and of Russia as a possible assailant, as we must always remember that the India we are bound to defend practically includes Afghanistan, with which Russia in Central Asia is conterminous. But there are other possibilities also, of which the recent invasion of our territory in South Africa is an illustration. I cannot help thinking that we are less secure against land attack at other points than we are often assumed to be. When the Fashoda incident occurred, there was no little amusement at the talk in French newspapers of making a land attack on Egypt from Algeria. There was good cause for amusement, as no such attack could be improvised. But, great as the distance is from Algeria to Egypt, is it so certain that, in conditions which are not inconceivable, an attack of this sort, long foreseen and arranged, would be altogether without chances of success such as would encourage adventurous generals and officers? Another possibility is that Turkey in alliance with other Powers might attack Egypt from Asia Minor, as Egypt has so often been attacked in historical times, and our defence might not be so easy. These are only illustrations. An empire with land frontiers like those of the British Empire cannot but need land defence, and those who have charge of the military forces of the Crown must consider all the chances.

A *sixth* object was suggested by Mr. Brodrick in his speech on Army Reform. The Army, it is said, may have to take part in continental warfare by assisting an ally, in which case two or three army corps would be required for a respectable appearance on the scene. With combatants nearly balanced, a force of this sort thrown into the scale by England would possibly have the kind of effect which resulted from the appearance of English troops in the Peninsula in the great war with France; but the use of the English Army in this fashion would arise from diplomatic and military incidents of a peculiar kind, and does not appear a special object to provide for. As the greater includes the less, provision for the other objects stated will secure that we can participate, when required, in a European war.

Having stated the problem in this way, I come to the question of numbers—how many on a peace, how many on a war footing?

It will be obvious from the description above given of the objects of our Army that the peace footing should adequately provide for the first three of these objects, viz., defence against civil commotion; defence against raids by sea on the mother country at the outbreak of war and until our general naval preponderance is converted in fact into unquestioned and overwhelming superiority over the particular enemy engaged against us; and the similar defence of our dependencies and coaling stations and depôts abroad. The essence of security against civil commotion is the provision of a force adequate to prevent any riot becoming a rebellion; and the use of garrisons is to prevent surprise, so that they should be always ready. On the outbreak of war it will be too late to raise new levies and reinforce stations that are inadequately protected. The Army on a peace footing, then, must be equal to the duties described. In addition, the peace army must be a nucleus of force, and must contain an organization enabling it to expand on a war footing for the other purposes contemplated—defence against possible invasion at home in contingencies that are not impossible, defence against serious invasion by land of any part of our extended Empire, and offensive action in certain contingencies against other Powers.

What force, then, is needed on a peace footing to meet these various objects?

I should say, to begin with, that about 30,000 men appear to be necessary, at least, for garrisoning our fortified depôts and fortified commercial centres at home. Portsmouth, Plymouth, Chatham, the Thames, the Mersey, the Tyne, the Clyde, Queenstown, and other places must all have fortifications sufficient to protect them against stray cruisers, and even against stronger attempts by sea, which may become possible by the successful evasion of our fleets. How this can be done with less than 30,000 men, if it can be done with even that number, it is difficult to imagine. Fortifications swallow up men. The Garrison Artillery on the home establishment appears to amount to about 10,000 men, and with Engineers and other troops to supplement them a figure of 30,000 is very soon arrived at. These are all required, let it be repeated, on the peace establishment. Should war break out, the garrisons may perhaps be increased or set free for other work by mobilizing Militia and Volunteers; but the brunt of the outbreak, the defence at the most critical moment, must be borne by the effective garrison actually in existence.

In addition, there should always be a field force at home of 80,000 trained soldiers at least, to guarantee civil order and to meet a descent upon Ireland or a large raid of that description. Half the 80,000, or nearly that number, will apparently be required in Ireland itself, about 30,000 to prevent the scandal that would be caused by any civil commotion, and the remainder being added to make sure that no expeditionary force can effect a successful landing. Many years ago, when I referred to the actual and indispensable garrison of Ireland as being about 30,000, military authorities challenged the statement, holding that although 30,000 soldiers were kept in Ireland, yet this was largely for reasons of convenience, and a garrison of 10,000, it was held, would suffice. I ascertained, however, that in the opinion of the highest civil authorities in Ireland nothing less than 30,000 was considered sufficient, the object being not merely to hold the country with a firm military grip, but to prevent even the beginning of a rising. In putting down 40,000, therefore, as the needful force to be stationed in Ireland for all objects in time of peace, including the stoppage of raids at the outbreak of war, I believe I am not so wide of the mark.[1] The estimate, again, of other 40,000 troops at home, in addition to garrisons, does not seem extravagant. We must be ready in Great Britain against raids at the outbreak of war on at least as great a scale as we are ready in Ireland, and even the chances of civil commotion are not wholly to be overlooked.

Along with the garrisons of fortified places, therefore, we should on this estimate always require at home on a peace footing about 110,000 trained soldiers —30,000 for garrisons, and a field force of 80,000. If we had such a field force it is obvious that incidentally an emergency like the late South African war could be met. The field force could be sent away and reserves of some kind called out to take their place. But equally the force must be there on a peace footing before such a use could be found for it.

I have to call special attention to the phrase "trained soldiers" which I have used. There is a great deal of confusion in these matters, from the way in which, for certain purposes, the numbers on the home establishment of the Regular Army are spoken of. These numbers, by the last estimate, are 155,000, which is 45,000 in excess of the number of trained soldiers required. Unfortunately the 155,000 comprise a vast number of raw recruits and immature youths who cannot be considered fit for service, to the number of perhaps 90,000 altogether. Deducting this 90,000 from

the 155,000, we get no more than 65,000, in place of the 110,000 which is the minimum number we ought to have according to the above estimate. But this by the way. I am only calling attention for the moment to a cardinal ambiguity in the Army statistics which is apt to confuse the amateur when politicians are handling the figures, not for the purpose of enlightenment, but in order to throw dust in his eyes.

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[1] See also the references in the debate on Mr. Brodrick's Resolutions to Mr. Childers's letters at the time of the Majuba business.

Next, what should be the peace footing of the Army outside the United Kingdom? Here again it must be remembered that, for the ordinary objects in view, peace footing and war footing are identical expressions, as at the outbreak of war there will be no time, and there may not be time for a certain period afterwards, to call out new forces and send them to the threatened points.

Answering this question, what we find is that, voluntarily or involuntarily, many parts of the Empire are capable of a great deal of self-defence, and do in fact raise forces which can be useful not only on their own territories but elsewhere. Canada and Australia are especially useful in this respect; but there are local defence forces in some of our Crown Colonies as well, while even settlements like Hong Kong and Singapore provide in part for their own defence. The strength already added to the Empire in this way is enormous, and with proper organization would be incalculable. It renders secure, with little or no Imperial effort, a great many commercial centres, depôts, and coaling stations throughout the Empire, and in a serious struggle, while we are preponderant at sea, gives us a large area from which to draw men and supplies. But the Imperial Government itself must contribute to the defence. The garrisons are a very serious matter. Apart from India, we maintain during peace about 55,000 troops in our dependencies, including the garrisons of Gibraltar, Malta, Hong Kong, Capetown and Simon's Bay, etc., etc., and no one can say the numbers are too

many. About 40,000 of these garrisons also are English soldiers, notwithstanding all that has been done to replace them in part by troops belonging to tropical races. In India we have or ought to have in normal times an English garrison of 70,000 men in addition to about 125,000 native troops: again another illustration of the local resources which the Empire can draw upon. Assuming for the present that the garrisons of such places as Gibraltar, Malta, Hong Kong, etc., etc., and of the great dependency of India, are generally sufficient on a peace footing—I should be very sorry to believe the contrary—yet there are one or two points in this business of garrisoning the Empire where the normal provision with which our rulers have hitherto been content is apparently inadequate. I would refer especially to South Africa and Egypt. In South Africa in 1899 we had no more than 15,000 troops, and according to the latest War Estimates this is apparently the normal garrison contemplated in future. I cannot help thinking, after the experiences we have had, that this is not business. No doubt South Africa is properly expected to provide largely for its own defence. Hence we are to have such forces as Baden-Powell's police. But a larger garrison of our own would appear to be necessary to make sure that we shall not have to fight another South African war. Instead of 15,000 we ought to have 50,000 men in South Africa for a few years at least, perhaps 100,000, mostly mounted men. There is the more reason for suggesting this as South Africa will obviously be an excellent training ground for the Army, giving plenty of room for manœuvres; while troops there, if they happen to be in excess, will be placed conveniently for transport to the East, or even home, if any emergency should arise. As regards Egypt, what I have said already will have indicated the nature of my apprehension. We have an English garrison in Egypt of 5,000 men only; and it may well be asked, What is this to meet a surprise and a raid by 20,000 men or more, which seems not

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lishment 360,000. This is 90,000 more than are now provided for in the Estimates and on the India establishment; but can it be said that the proposed numbers are at any point excessive? Recollecting what happened in the United States for want of an army, and what happened to ourselves in South Africa two years ago, we can all see how much cheaper it is to maintain a proper force than to run any risks such as we are now doing. Whatever nice calculations we make, we should conform in this matter to the practice of engineers in estimating for works, and add a large percentage for under-estimates and the unforeseen.

We come then to the second question as regards the Army, viz., the numbers on a war footing. Here we have in view the last three objects above mentioned as those for which an English army is maintained, viz., the provision against invasion at home on a large scale, or against a great war abroad on a land frontier, or in support of a European ally. Those who deny the possibility of an invasion of the mother country will at least admit the chance of more serious war elsewhere, so that the practical conclusion is very much the same. No doubt if we retain command of the sea we shall have some time after the outbreak of war to prepare forces for such eventualities, but we shall save much by having a good organization meanwhile, and trained forces in reserve which can be called out in a short time—the quicker the better.

What I should like to see would be first of all a reserve of Regular trained soldiers equal in quality to the 270,000 trained soldiers, exclusive of recruits, who are to constitute, according to the above sketch, the peace army. The numbers of this reserve should also be considerable, at least equal, I should say, to the home field army *plus* half the force we maintain abroad—that is, to about 160,000 men in all. One half of these reserves would replace the field army at home when it was called away for foreign service, and the remainder

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must either form part of the one Regular Army and be trained and disciplined as such, or must be auxiliary forces such as the Militia, Volunteers, and Yeomanry now are, not so fully trained as the Regular soldiers and only to be called out on emergency, but still sufficiently trained to form part of the fighting line.

What should be the numbers of such forces? On this head I should be disposed to accept the promise of Mr. Brodrick that he aims at about 150,000 of Militia and Militia Reserve, 250,000 Volunteers, and 50,000 Yeomanry, giving a force in all of 450,000, or say, making deductions for recruits and youths as in the case of Regulars, 350,000. This would give in all an army on full war strength, not including recruits or men unfit for service, as follows:

Regular Army, including garrisons . . .	270,000
Regular Army Reserve	160,000
Auxiliary forces	350,000
	780,000

Deducting the garrisons at home and abroad the numbers would be 620,000, and would suffice, perhaps, to raise the army in the field for any specific purpose from the figure of 160,000 above stated to one of about 400,000, which the numbers in reserve would suffice to replenish for a considerable time.

Looking at the matter in detail we cannot say, I believe, that the figures stated for the Army on a peace and on a war footing are too high. The total of the Army on a full war footing is obviously somewhat speculative. As the contingency cannot occur without our having some time and warning to develop all the force required, the question has not perhaps the urgency of other Army questions; but, with this exception, all the various questions are most urgent indeed, especially the question of the peace establishment of the Army. The work it may be called on to do is mostly of a kind that it has always to be ready for in peace, and the larger army which events may compel us to raise will only become a possibility if we have an effective Regular Army to begin with. The practical point to keep before the public is the need for numbers. Our forces all told, excluding colonial forces and the native armies of India and other possessions, must be over 600,000 on a full war footing; and in time of peace we must not have fewer than 360,000 men, including about 90,000 recruits and young soldiers, under arms in the Regular Army, including India, with 160,000 men of the Regular Reserve behind them, ready to be called on without delay.

As to the composition of the force, the proportions of the different arms, the organization into army corps and otherwise, the provision of reserves of guns, ammunition, and equipment, these are all matters for experts where the public can hardly expect to follow. The experience of the late war showed that the man in the street was frequently sounder in his judgment even on technical matters than the War Office expert. He "spotted" the necessity for more mounted men and for reserves of ammunition while the War Office remained densely ignorant. But it is none the less impossible for the outsider to follow the details of technical discussion. He may be right at one time and wrong at a dozen other times. On these points experts must be left to watch each other, and the opinion of the Army itself is the only means to keep the authorities straight. When the War Office fails to command the assent of the Army on such points, there is sure to be something wrong.

Two points, however, remain on which public opinion has to form a judgment. How are the requisite numbers to be obtained? And what are the resources of the country to pay the bill?

As to the numbers of the Regular Army, I am sorry to say, from all the study I have been able to make of the subject, that all the discussions hitherto have been in the air, because the authorities will not face the dilemma in which they are placed—the one horn being that of paying the Army properly so as to ensure a supply of men, and the other that of conscription so as to obtain by force a service that is not given in sufficient abundance by those who are competent to perform it. This is the crux of the whole question of Army Reform. Men are wanted, and men are not got under present conditions and at the present rates of payment. As my military friends are never weary of repeating, the position is that the pay of the Army is quite insufficient to attract young men old enough and intelligent enough to go into the fighting line after a few months' training, and with constitutions sound enough to stand the wear and tear of service. Instead, we have lads who are many of them rather stupid, who take a year or two to train, and who take a year or two, perhaps two or three years, to grow old enough for the work. The result is a formidable wastage. One-third of the recruits, I am told, never become soldiers at all, but have to be discharged, and the time of drill-instructors and officers is wasted in trying to convert intractable material into fighting men. In such conditions it is a miracle that so much good material is obtained, but unfortunately there is not enough. The official establishments are not only fixed too low, but they are not maintained. As to the remedy, I have myself no doubt. We must, like other employers, pay the wages needed to attract the service, if we can afford the money, as I have no doubt we can. What the addition to the Army pay should be is, of course, a difficulty. It would be folly to offer too much. It would be equal folly to offer too little and fail. But, as far as I can form an opinion, the sum to offer the private is an effective 2*s*. a day or thereabouts and all found, as compared with the present offer of 1*s*. a day subject to stoppages and without everything being found. Two shillings a day would come to about £40 a year; and everything found, including clothing, would add about £25 a year to the sum, thus bringing the soldier up to the level of the average wage receiver in the country, instead of leaving him far below it as he now is. Other ranks would, of course, have to be raised in proportion; and the officers also, especially as more is to be exacted from them in future, must have their pay increased. But whether the present suggestion is sufficient or not, there must be no hesitation in the matter. The question is one of terms, and we must bid as high as necessary for the article required if we adopt the alternative of paying for it instead of obtaining it by force.

As to the alternative of conscription or force, I have no objection to it in principle. We must have men for the service of the country, and force may have to be used in the last resort. What I doubt, however, is the economy of the proceeding. If we force people into the ranks of the Army who are able to earn outside the equivalent of 2*s.* a day with everything found and upwards, and we pay them substantially less, we may be quite sure of a discontent so great as to be intractable. It is not in human nature for large masses of people to submit to such odious exaction, and we cannot have the instrument of maintaining social order, on which the cohesion of society depends, in the hands of the discontented and mutinous. We save all such risks by having a volunteer army, and by raising the terms to the necessary amount. If there are practically no terms which will bring volunteers in the requisite number, then conscription there must be; but equally we must pay the conscript army the equivalent of the average wages they would receive outside.

Of course, so great an addition as that of 1*s.* a day to the pay of men in the Army, with other equivalent additions, would add greatly to the cost. On the present establishment of 155,000 men at home, and 55,000[1] men in the colonies, whose cost is chargeable to the English Budget, the addition of 1*s.* a day per man would come to £3,832,000, or say £4,000,000 per annum. If at the same time the numbers of the Army are considerably increased, we can perceive at once how formidable is the question of an increase of the pay of the Army to the English Treasury and to the House of Commons. All that can be said is that the question, however disagreeable, must be faced. There is no use pretending to have an adequate Army if we shrink from the necessary outlay. In my own judgment, this shrinking would be most unworthy of a great nation and excessively foolish. The profit to be derived from an adequate Army, in the security of social order and freedom from international disturbance, is so overwhelmingly great that it is worth the price and more.

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[1] These include about 15,000 men of tropical races (see above); but this is a minor detail and may be passed over.

It would be a mistake, further, to suppose that there will be no compensating economies. On the contrary, we may set against the increase of pay the saving to be effected by a diminution of the number of boys and other incapables with whom the recruiting sergeant now fills the ranks. Suppose, instead of including on the home establishment 90,000, or about two years', recruits, we were able to reckon as immature and untrained only 40,000, we should save the whole cost of 50,000 men whom we now pay for and who are unfit for duty—a number almost as great as the addition proposed to be made to bring up the garrisons of Egypt and South Africa to the proper strength. In other ways the saving would also be considerable. We should have a larger army than we now have, and a good army all through, instead of an army spoilt by gross defects, and this of itself would facilitate other economies.

Regarding the auxiliary forces, there is not quite the same difficulty that there is with the Regular Army as to obtaining the numbers wanted. Very large numbers on paper are now obtained, probably sufficient for all practical purposes if a portion only can be trained so as to form an effective part of the fighting line, which it is the opinion apparently of the military authorities they can become. At the least, the training of the auxiliary forces advances the individuals so far that at need the Regular Army has a certain amount of raw material to draw upon which can be licked into shape more quickly than the ordinary recruits. One suggestion I have to make on this head would be that to a certain extent the Militia and Yeomanry as paid forces must be paid in proportion to the Regular Army according to the work they have to do, and this may be a serious matter if even a moderate standard of efficiency is insisted upon. The great danger of such auxiliary forces is that they may exist on paper only. Another suggestion is that conscription, while it may be found inapplicable to the Regular Army, may be used both to strengthen the auxiliary forces in numbers and to make them genuinely efficient. It is not unfair in the State to require that all young men as they come to the age of twenty-two should have qualified themselves to perform military service if they are medically fit, and that if found not so qualified they should be compelled to train in the Militia or Yeomanry for one or two years so as to become qualified. Such an obligation would stimulate volunteering or enlistment in the Militia or Yeomanry, while giving the military authorities a firmer hold over the Volunteers by their being able to define effectively the qualification to perform military service. It would certainly be of great advantage to the State to possess the large numbers of trained men which such regulations would give them, and to have Militia and Volunteers so far trained that the entire Regular Army and Reserves could be spared at need in some form or other for foreign service.

The conclusion, then, is that for the purpose of obtaining sufficient numbers the pay of the Regular Army must be sensibly increased, and that the pay of Militia and Yeomanry may also have to be increased in proportion; but that the numbers of the auxiliary forces generally may be increased by a modified form of compulsory service, to which I believe there could be no objection. The difficulty when faced is thus not a real one. It may be said, and many no doubt think, that it would be far simpler to have nothing but a Regular Army, and to leave the auxiliary forces out of the reckoning. The money spent on the latter, it is urged, would bring in a better return if it were used to make an addition to the Regular Army. But there is a great advantage, it seems to me, in having both a Regular Army, if it is sufficient for all the miscellaneous duties of the English Army in time of peace, and auxiliary forces along with it. We cannot tell how much the nation may be called on in great emergencies, and when these come we shall be all the better prepared if military training and skill in shooting are widely diffused among the population. It will be an advantage to the State also to have the whole population thus educated in the elementary duties of citizenship and the meaning of Imperial privileges and burdens.

There remains the question of ways and means. Already we have Army Estimates of £30,000,000 per annum, apart from the South African war, as compared with £20,000,000 two or three years ago. If the pay of the Regular Army is increased as proposed, this will add directly about £4,000,000 to the Estimates, and a further large sum will be required on the score of additions to the numbers of the Regular Army, about 50,000 net as compared with present establishments, allowing for the substitution of effective men for ineffectives. This would cost another £5,000,000 or thereabouts. Other outlays are also in view, such as the provision of improved barrack accommodation, the increase of reserves of ammunition and equipment, the multiplication of officers so as to secure the training of reserves and auxiliary forces, the increase of the proportion of mounted men in the Service, the increase of artillery, and so on. It is quite certain, practically, that with all the economy possible we shall have Army Estimates of £40,000,000 and upwards in peace times before very long. We were living in a fool's paradise before the South African war, and are now awaking to the realities of life. I would point out, however, that, although the figures sound large, people forget how large has been the increase of wealth in the country for many years past. With Army Estimates of £40,000,000 and Navy Estimates of equal amount, we shall be paying no more in proportion than other countries do, and less than we have paid in former times, and less than we have paid even in this South African war for a couple of years when money has been made to flow like water, and numberless lives have been lost, all because we were so unprepared. The country can well afford to meet such outlays, and the sacrifice should be willingly made.

I have written at greater length than I intended when I began, but perhaps a summary of a few principal points may be allowed, so as to familiarize the reader with the essential ideas, in my judgment, which should be kept in mind in these discussions:

(1) The Regular Army is required primarily, as all other armies are required, for the maintenance of internal order; and for this reason alone—that is, to garrison Ireland and to keep order in Great Britain—a considerable force must be kept.

(2) The Regular Army is required, further, for defence of fortified ports and centres at home, and for the defence of the whole country against raids by foreign Powers either at the outbreak of war or in the interval which must elapse before our general preponderance at sea is converted into overwhelming superiority in fact over the particular enemy engaged.

(3) For these two purposes alone we appear to require about 110,000 trained soldiers altogether, exclusive of recruits and immature men, viz., 30,000 for garrisons and 80,000 as a mobile force.

(4) There is much confusion in these matters, from the War Office habit of counting recruits and immature men as part of the home establishment; so that with the present establishment of 155,000 there are not in fact more than 65,000 trained and mature men, instead of the 110,000 actually required both for garrisons and field force. The three army corps of 120,000 Regulars supposed to be ready for foreign service according to Mr. Brodrick's scheme cannot in fact exist, because there are only 65,000 available for all purposes, including garrisons; and deducting 30,000 for garrisons, there are only 35,000 available instead of 120,000.

(5) The Regular Army is further required for garrisoning India, South Africa, Egypt, Malta, Gibraltar, and other possessions and fortified places abroad, and it appears on this head that considerable additions ought to be made, both South Africa and Egypt in particular being insufficiently provided for. The numbers we require in all for these garrisons appear to be 160,000, instead of 110,000 as stated in the Army Estimates. It seems unnecessary to labour this point while about 140,000 of the Regular Army, besides irregular forces, are in South Africa alone, engaged in garrisoning the country, and not in actual war. We must make up our minds to have larger figures to deal with for garrisoning the Empire than the Government put forward as their peace estimate.

(6) Altogether, including the Indian force, we require a Regular Army of 270,000 men, besides 90,000 recruits and immature men on the present system of recruiting, or a total of 360,000 in all.

(7) In addition, we require about 160,000 reserves for the Regular Army, besides help from the auxiliary forces, so as to provide for the possibility of serious invasion by sea when invasion, though not strict blockade, may be possible to a momentarily superior enemy, and so as to provide also for serious wars abroad.

(8) To get the numbers required an increase of pay for the Regular Army is absolutely necessary; and the

increased pay, coupled with the necessary additions to the trained men in the Army, after allowing for the substitution of effectives for ineffectives by means of higher pay, would probably add about £10,000,000 to the existing peace Estimates of £30,000,000, making £40,000,000 in all.

(9) We must remember, however, that there has been an enormous increase of wealth in the country for many years past, and that we are only awaking to the realities of existence as far as military and naval preparation is concerned. Even if we had to pay £40,000,000 apiece for Army and Navy we should still be less burdened than other nations and should not be paying more than we can well afford.

(10) Conscription appears to be unnecessary for the Regular Army, as to which we must trust to higher pay, but it may be useful in connection with the auxiliary forces, qualification for military service being required from all young men on reaching a certain age, failing which they must be enrolled in the Militia. It is desirable, for many reasons, that military training should be widely diffused.

(11) Organization is specially for the military experts, but nothing can be done without numbers, and the numbers I have stated are the minimum of what is now required, looking to all our commitments in India, South Africa, Egypt, and elsewhere, and on the assumption, which is a matter to be seen to, that our Navy is really preponderant.

XXV.

THE STATISTICAL CENTURY.[1]

THE present meeting takes place at an interesting date. We are within a few weeks of the close of a century which is, historically speaking, the statistical century *par excellence.* There were statistics, of course, before the Nineteenth Century. People made statistical statements and compiled statistics long before they were called statisticians. The business of rulers could not, in fact, have gone on at any time without statistical knowledge, and statistical statements are to be found accordingly in the records of Egypt, Assyria, and Babylonia thousands of years ago, just as they are to be found in old European chronicles and histories long before last century. But while people for a long time, like the Frenchman in the play who talked prose, have thus been statisticians without knowing it, it is towards the end of the Eighteenth Century, and at the beginning of the century now expiring, that statistics began to be formally recognized as a distinct branch of knowledge. From that time attention has been explicitly and increasingly given by governments to the collection of statistics. Statistical offices have been established for births, marriages, and deaths, for statistics of foreign trade and movements of shipping, for agricultural statistics, and for many more subjects, as well as central offices for statistics generally. Last, but not least, with the commencement of the century, we had the institution of the census in this country, following the example of the United States a little while before, and other experiments, chiefly in the Scandinavian countries, in the Eighteenth Century. Decennial and frequently quinquennial censuses have already become almost universal throughout the civilized world. To all this must be added a wide cultivation of statistical methods apart from government. Associations like your own have been formed to promote the study. Professorships of statistics have likewise been set up in the universities, though fewer, much fewer, in this country than in Germany, France, and the United States. Men of business have also been giving their minds to the subject till almost every sort of business and administration—financial, banking, railway, insurance, etc., etc.—has each its own statistics, while business and economic journals, all dealing largely with statistics, are to be counted by scores and hundreds.

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[1] Address at the Annual Dinner of the Manchester Statistical Society, October 17th, 1900.

All this makes the expiring period characteristically a statistical century. What is gained, then, it may be asked at a gathering like the present, by all this figuring and adding up, which hardly existed in the world by comparison before last century began? To answer this question would be to engage in a discussion on the utility of statistics which would be commonplace in a statistical society. The question also answers itself, for statistics would have been abolished by common consent long ago if people in business, for instance, had not felt the convenience of following the statistical position of their different trades, and if public men had not found it equally necessary and convenient to acquaint themselves with the facts of trade and social conditions which the census and the records of the Registrar-General's and other public offices give them.

Without attempting to answer the question fully, however, it may be of some use and interest, I hope, to draw attention to one or two leading statistical ideas which the statistics of the first statistical century, when a general survey is made, cannot but suggest. This is not a new topic with me, as it is the subject of addresses to the Royal Statistical Society of London about eighteen years ago. The lapse of time since then, however, makes the figures even more decisive and impressive than they were, just as the close of the century gives us a more definite period. I trust I shall be excused, then, for returning to the topic. When your invitation was received there was a chance that we should by this time have the exact figures of the American census for this year, so that it might be possible to compare actual progress since 1880 with the rate of progress before that, but the chance unfortunately has not come off. Still there are materials for the discussion proposed, as the results of the census within limits are no way in doubt.

A leading idea, then, which the census figures of civilized countries supply is the prodigious rate at which the civilized world—the community of European nations and nations of European origin—is growing. The population of Europe and of nations of European origin, like the United States, may now be put at something over 500 millions. The United States themselves may be put at nearly 80 millions; Russia, in its recent census, shows a population which must already have grown to about 135 millions; Germany, about 55 millions; the United Kingdom, with the self-governing Colonies of Canada and Australasia, and the white population of South Africa, 55 millions; Austria-Hungary, 45 millions; France, 40 millions; Italy, 32 millions; Spain and Portugal, 25 millions; Scandinavian countries, 10 millions; Holland and Belgium, 10 millions; and other European countries 20 millions. These are all round figures, of course, and if they are not exact at the moment they will certainly be exceeded in a year or two, so that they are safe round figures to take as the total numbers of the peoples concerned at the end of the century. We are quite within the mark, then, in saying that the total population of Europe and of nations of European origin, excluding the subject peoples of the English Empire, exceeds 500 millions.

A century ago, however, the corresponding figure to this 500 millions would not have been more than about 170 millions. A French statistician, M. Moreau de Jonnés, whom I quoted in 1885, gave the figure in 1788 for Europe alone, excluding the United States, as a little less than 150 millions, and making one or two corrections and allowing for some growth in the interval from 1788 to 1800, we cannot arrive at more than 170 millions a century ago for comparison with the 500 millions of the present time. The United States which now counts for nearly 80 millions was only about 5 millions at the beginning of the century; Russia did not count for more than, perhaps, 40 millions at the outside; the United Kingdom, which had then hardly any Australia or Canada, 15; Germany, 20; France, 25; Austria-Hungary, 20; Spain and Portugal, 15; Italy, 15; Scandinavia, 5; other European states, 10—total about 170. In the century, therefore, Europe and nations of European origin have grown to three times their former numbers; and this without counting the population of Mexico and South America, amounting now to 45 millions, which ought, perhaps, to be included as Europeanized, though not wholly European in race. When I wrote formerly, dealing with the figures up to 1880, the populations in question numbered less than 400 millions. More than one-fifth of the 500 millions is an addition of the last twenty years!

Not only is the century interesting, therefore, as a characteristically statistical century, but the statistics themselves are in the highest degree surprising. For generations and centuries the growth of Europe must have been slow, owing to war and pestilence and the other checks to population of which Malthus wrote; and then all at once in a single century we have this sudden multiplication of numbers. In my former addresses I discussed some of the causes of this change —the growth of large states, the profound peace existing as compared with former times, and the occupation of new lands in America and elsewhere—but it would occupy too much of our time now to resume the discussion, and I can only note its importance in passing, especially the importance of the transitory nature of one of the causes, the occupation of new lands, which has given Europe a breathing time for a few generations, but for a few generations only.

The economic development of the people, I need hardly say, is even more marvellous. Agriculture has extended indefinitely over the new territory, and there have been vast improvements in new and old territory alike; the figures of trade have been multiplied ten times and more; the wealth of the peoples all told, which would probably not have been reckoned at more than five thousand millions sterling at the beginning of the century, must be reckoned now by tens of thousands of millions. It would probably not be far short of the mark to say that while the millions of the advanced portion of the human race have increased in numbers as described, each unit on the average is two or three times better off than the corresponding unit at the beginning of the period.

Again, the development is for the most part not uniform among the European populations; it is most marked in the Anglo-American section. The increase here is from a population of not more than about 20 millions, which was the population of the United States and the United Kingdom together a hundred years ago, to a population of not less than 130 millions at the present time. Russia and Germany also show remarkable increases, but nothing like this; while the other nations of Europe are by comparison nowhere as regards this increase, France especially being nearly stationary. The Anglo-American section shows an even more significant economic development, which it is needless to enlarge upon. It is the United States especially, again, which has been advancing the most rapidly of all. One explanation, of course, is that to some extent the overflow from Europe, including Russia and Germany, has gone to the United States, which is a reason for taking all the countries together in a general survey; but, none the less, the gain is to the United States which absorbs the immigrants and transmutes them into Americans—part of the foremost nation of the time, and not members of the nationalities from which they sprang.

This astonishing growth of population means a great change in the relative position of the European nations in the world—their relative weight in international politics. Practically, the non-European races of the world have all the time been stationary, except in India, where the *pax britannica* has permitted the native population to expand. They have been living in the same places and under the same conditions as they have done for centuries, peopled up to the limits of subsistence under those conditions, and, therefore, incapable of expansion. The result is that the forces of civilization as against those of the black and yellow races have become practically irresistible. The numbers are relatively far greater than ever they were before, and the economic force is indefinitely greater.

A great change in the distribution of political power among European nations themselves is also indicated. The existence alone of the United States implies an immense change. If we consider that an empire like that of Britain has its strength rather diminished than increased by the possession of territories like India, then the United States, having a larger European population than that of the British Empire, may be considered the most powerful state in the world, as far as population and resources are concerned. The white population is over 70 millions as compared with 55 in the British Empire and an equal number in Germany, and much smaller numbers in any other state except Russia. No doubt, Russia has much larger numbers, but the inferiority of the units is so great that the pre-eminence of the United States is not in question. And this is the position of a new state which had birth a little more than a hundred years ago. At the same time, Germany, Russia, and the United Kingdom have all grown, while France and Austria have, by comparison, remained stationary; so that now the great world powers are four only—the United States, Britain, Russia, and Germany, with France a doubtful fifth. The extent of the revolution that has taken place in a century is evident and obviously accounts for much that is going on in international politics.

There is yet another aspect of the statistics which we cannot leave out of sight. The changes which have occurred in the past century are still going on. The statistics are those of growing forces, and as the rest of the world is stationary, while there is unequal growth among the European nations themselves, the international position cannot but be modified at some near date in the future. An absolutely definite statement cannot be made as to what lies before us, because tumults and revolutions from which history has never been free may change so much. We may recognize, however, that if the forces now in existence continue to operate as they have done in the past century for only a few more generations, the close of the coming century must witness a farther transformation, whose beginnings will be apparent in the lifetime of some amongst us. It is a reasonable probability that unless some great internal change should take place in the ideas and conduct of the European races themselves, the population of 500 millions will, in another century, become one of 1,500 to 2,000 millions. The black and yellow races still remaining, as far as one can see, comparatively stationary, this will make a greatly changed world. The yellow peril, for instance, of which we hear so much, will have vanished, because the yellow races themselves will be so outnumbered. What will be the 400 millions of China compared with 1,500 or 2,000 millions of European race? Farther progress must also be made in the re-distribution of power among European nations. The next century will not be far advanced before the United States, which is already in reality the most powerful single state in the world, will be generally recognized as such. By 1930 its population will, probably enough, be 150 millions, as compared with about 90 millions of European race in the British Empire, with about 80 millions in Germany, and with the numbers not so much increased, compared with the present, in other countries of Europe. Russia may then, perhaps, have a population close upon 180 millions, but the units unequal to those of the United States. As the century advances, moreover, Russia will probably be surpassed even in population, and the pre-eminence of the United States will be unquestioned. Other nations like France will have fallen still more into the background, and international politics will be more and more limited to the affairs of what are already the four great powers—the United States, United Kingdom, Germany, and Russia.

In all this let it be repeated there is no attempt at prophecy. It is merely a bare statement of what must be, assuming the continuance for a generation or two only of the present conditions as to the growth of population and wealth in the countries referred to. Should the assumption fail, however, this will of itself imply other changes of a remarkable kind. Population cannot stop growing at the prodigious rate of last century or something approaching it, without a great deal besides happening of an astonishing nature. Looking at past experience, however, the probabilities are entirely against a speedy check to this growth.

The most serious problem will, of course, be whether the dilemma stated by Malthus, and which has been rather put aside for a century in consequence of the occupation of new lands by the growing European populations, will, at length, become an urgently practical question. Sir W. Crookes's paper at the British Association two years ago, though it was not without defects, may be taken as evidence that the idea cannot be easily got rid of. It is simply impossible not to wonder which of the two forces—the growth of population and the increase of the needs of the growing population on the one side, and the growth of invention and mechanical power in supplying human wants on the other side—will gain as time goes on. It is hardly possible that there can always be equilibrium, or that the conditions of the Nineteenth Century, in which the growing population has always been provided for, will continue indefinitely. A turn may come at any moment in the opposite direction. Possibly the force of the dilemma may be first felt in our dealings with those black and yellow populations which are subject to civilized rule, and which begin to increase under that rule without any proportionate increase of their resources; but the conditions of the dilemma are always there, and the statesman of the future must certainly look out for difficulties of a formidable kind. It is not merely a question of food we must remember. As Professor Cairnes long ago pointed out, it is a question of everything necessary to supply human wants; the metals presenting as much, or even more, difficulty than food.

To turn from these topics I should like to advert for a moment to yet one more conclusion, which seems to be suggested by the statistics, and which may not be without practical value in economic discussion. Many people are puzzled by what they speak of as the necessity of finding new markets, with competition on all sides increasing around us. For this reason they are anxious to obtain possession of the territory occupied by black or yellow races, or to prevent the exclusive occupation of such territory by rival powers. The same idea has obviously dominated the politics of Germany and France, and it has not been without some influence perhaps even in the United States, which is now to be included among the countries manufacturing for export. But the figures we have been dealing with point to quite another source of new markets, within the control of the very peoples for whom there is so much anxiety. Surely, there can be no lack of new customers if the 500 millions of the advanced races themselves are to be doubled in 30 to 50 years, and trebled or quadrupled in a century. With such a growth of population there must be growing markets, each nation having its own share, apart from any possible improvement among the black and yellow races, though such improvement as a source of new trade is not to be ignored or despised.

In this view, then, the statistics as to the actual growth of population in the world are reassuring. We have the same certainty of growth that people would have had a hundred years ago, if they had foreseen the discovery and occupation of region upon region inhabited by uncivilized tribes which has been one of the features of last century's progress. To create a new population comes to the same end as finding a population already existing. The latter can no longer be hoped for as the world is being explored and occupied; but the former remains, and it is the more important factor in the progress of trade.

In conclusion, may we not entertain the hope that the coming century, like the one which is passing away, will be characteristically a statistical century? We have had satisfactory experience so far of the uses of statistics, and the problems before the world where statistics can help are likely to be not less, but more, difficult and anxious than they have been. Politics must be more and more governed by true ideas drawn from statistical information, and as time goes on the statistician should be more and more recognized as preceding the "statist" and economist. Associations like yours must also prove of increasing interest and importance, and for this final reason I have the greater pleasure in proposing the toast intrusted to me — the Manchester Statistical Society.

XXVI.

ARE WE LIVING ON CAPITAL?[1]

THERE has been much talk lately of the waste or expenditure of National Capital in different ways. One of these ways is the expenditure upon armaments and preparation for war. Nations, it is alleged, are engaged in a competition where all must lose, spending more than they can afford in preparation for the evil days of a war which may never come, and piling up heavy debts which they can ill bear, so that their whole industry is crippled in consequence. While they are not alone in the matter, American statisticians and economists, as well as American public men generally, have a good deal to say on this head to the disadvantage of European nations compared with America. The greater welfare of the American people, and the superior productiveness of their industry, are asserted to be the result of the freedom of America as compared with Europe from such wasteful expenditure. Another kind of discussion which has taken place is with reference to the position of this country in its international trade. The allegation is made that, in the course of this trade, we are living upon our capital, parting with valuable property in order to obtain food and other things which we import from abroad, in excess of the goods which we are able to export. Metaphorically speaking, it is said that, as a nation, we shall, before long, be in the poor-house, or what answers internationally to the poor-house. It may be useful, therefore, to examine, in a general way, the meaning of the expressions used, and inquire to what extent, and in what manner nations may waste or expend their capital. In doing so I may refer with some frequency to actual concrete cases presented to us by history or recent experience, and especially to one or two of the cases now forming the subjects of criticism and discussion.

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[1] Read before the Institute of Bankers on Wednesday, May 22nd,

There appears to be a good deal of confusion of mind in these discussions and in the use of phrases as to expending or wasting national capital and a nation living on its capital, which is really due to a false analogy, the analogy of an individual who wastes his capital or lives upon his capital, and, in consequence, comes to poverty. We are all familiar with such individual cases. There is the well-known case of the young spendthrift, who comes into a fortune, and who then, as it is said, "goes the pace" and parts with one bit of property after another in order to obtain the commodities and services which he consumes or gives away. Then we have the business man who draws out of the concern in which his capital is invested more than his profits and lives at a greater rate than he can afford, who does in a quiet way, in short, what is done by the spendthrift and wastrel recognized as such, and, substantially, in the same form, that is, by parting with one bit of property after another. Then we have the business man who makes bad speculations, buying repeatedly at a high price and selling at a low one until at last his own money or capital disappears, or who makes bad debts, which is really another form of the same disease, the low price at which he sells being, sometimes, merely an irrecoverable debt. In these different ways an individual may waste or expend his capital, and so, it is assumed in common speech, a nation gets through its capital when it engages in a process of wasting or expending or living upon its capital.

What I should like to point out, however—and this is the substance of much that I propose to say—is, that the individual analogy fails in the case of a community or a nation. It is of the essence of the individual process of waste in most cases that the property of the spendthrift or wastrel should be sold or transferred to some other person or persons in the community, either for no consideration or in exchange for goods or services forming part of the accruing income of the community, and which the spendthrift consumes. The spendthrift parts with property, with things which constitute capital, and receives, in exchange, other things which are really income, and not capital, and which he consumes, that is, if he receives any actual equivalent at all. The final result is that he and his capital are parted; but the capital itself, the money, the estate, or the house, of which it consisted, remains, having passed into the hands of others, sometimes without any real equivalent, but, at other times, in exchange for part of the accruing income in the hands of the people to whom the spendthrift has transferred his property, and whose share in the transaction is really the investment of an amount equal to that which the spendthrift has parted with. There is waste of capital, accordingly, as respects the individual, but there need be no waste, and usually, I should say, there is no waste, or very little waste indeed, as far as the community is concerned. But when we come to the case of a community or a nation expending its capital there is, plainly, not the same room as in the case of an individual for the process of selling or transferring property, either for no consideration, or for commodities and services that are immediately consumed, which makes the waste of capital so easy to the individual. There are some questions, perhaps, as to transfers of securities from one nation to another, but, broadly speaking, a community cannot waste capital in the same way that an individual may do by selling property and consuming what is obtained from the sale. A community cannot sell or transfer to itself. When a community or nation, therefore, expends or wastes capital, or lives upon its capital, what is meant is, either that the nation does not properly repair and renew machines, houses, and other property of a fixed kind, or that some of the more perishable property, such as the flocks and herds of an agricultural community is actually consumed, so that at the end of a given period there are fewer things in existence constituting the capital and wealth of the community than there were at the beginning. In these ways, and no other, can a community or nation waste its capital or live on its capital. As far as individuals are concerned, A may be poorer and all the other letters of the alphabet richer, the aggregate property remaining the same, but when we deal with a community as a whole, there must be an actual diminution of the aggregate wealth or property to constitute a waste of capital.

To be quite accurate, we must allow, of course, for the changing population of a community. If the numbers of a community are constantly increasing, and the capital remains the same without any actual diminution, then at the end of a given period there is less capital per head of the community than there was at the beginning. In other words, a community which is constantly adding to its numbers must be constantly adding to its capital, if things are to remain in equilibrium. If the addition of capital again is not equal to the addition of numbers, there may still be some diminution of capital per head, although not so great as in the case where no addition is made whatsoever to the capital. While noticing these refinements, however, we must recognize that the broad fact to be kept in mind is the necessity of an actual diminution or deterioration of the things which constitute capital relatively to the numbers of the population in order to establish a waste of national capital in a particular case.

There is no doubt the exceptional case which has been referred to of a nation parting with securities or properties it possesses to other nations, in exchange for consumable commodities, which are, in fact, consumed.

Where and to what extent this may be done are, of course, questions of fact. It is important to observe, however, that even such a transfer, though it may take place, would not of itself show a nation engaged in the transfer to be living on its capital. If a nation, at the moment of parting with some of its property or capital to individuals of another nation, should at the same time be investing an equal amount at home, clearly there would be no reduction of that nation's capital in the aggregate. It would merely be substituting an investment at home for an investment abroad, an economic circumstance of some importance, but not the same thing as a nation living on its capital.

When we come, then, to examine specific cases of nations wasting or spending their capital, what we have to look for are signs of the national estate or property deteriorating for want of repairs, or signs of its stocks of useful things diminishing in the aggregate. All must be put together and an increase in one direction set against a decrease in another direction. For this purpose, it will, probably, be found convenient to apply values to each kind of property, so as to be furnished with a common denominator for measuring loss in one direction and gain in another. But it must not be inferred or assumed in any way that a diminution of capital in some specific direction involves an equivalent loss, on balance, to the community. It might happen, for instance, that stocks of some of the goods diminish because of an acceleration of business methods which make a smaller stock sufficient for the work to be done. If, against the smaller stock of some goods, there could be set some increase of other goods, or an increase of fixed property of equal value, then such diminution of stocks would clearly imply no impoverishment in any way. The effect is that the valuation of the whole property of a nation, at frequent intervals, appears to be the best way to bring to book the question of expenditure or waste of the property itself. Whatever may be the precise method followed, there must be a balancing of loss and gain, so as to draw out the net result to the community as a whole.

With these preliminary observations I propose to deal, first, with the question of a nation living on its capital in consequence of the nature and results of its international trade. The case is quite different from that of a nation losing its capital in consequence of excessive expenditure on armaments, although the one thing may, of course, to some extent be the cause of the other. A nation which is extravagant on armaments may have to part with its capital to provide for the extravagance, just as it would part with its capital in order to provide for any other extravagance. It is not suggested, however, that extravagance on armaments has been the main part of that general extravagance which has created the excess of imports over exports that gives concern to so many people as the final and complete proof of our commercial decay.

The allegation, generally, is that we are living on our capital because there is an excess of about £180,000,000 in imports over exports. In the year just passed the excess is almost exactly £170,000,000 sterling. The imports in that year were £524,000,000, and the exports, including British and Irish produce and Foreign and Colonial merchandise, were £354,000,000, leaving the difference stated. And, as such like excesses have been going on for many years, and increasing from period to period, it is argued that the waste of capital in the United Kingdom must really have been enormous, and that we must be getting poorer and poorer in our relations with foreign countries. It is further urged in proof, I believe, that as a matter of fact, we have lately been parting, in our international dealings, with certain kinds of securities, especially American securities, and that, to some extent, our foreign neighbours have been lenders and depositors in the Short Loan Market of Lombard Street to a greater extent than at any former period. In other words, then, it is said there can be no doubt we have been living upon our capital, as we have been sending abroad the securities which we once possessed, and have been becoming indebted to foreign countries, results corresponding, in fact, to the excess of imports over exports shown in our trade returns.

Such is the allegation, and the question is how we are to deal with it in a particular case according to the principles laid down at the beginning of this paper.

I would notice then, first of all, that the statements are not even formally complete for the purpose of proving the point to which they are addressed. That we are parting with our securities and becoming, on balance, less of a creditor nation than we were before, is not a fact, even if it were true, which would prove that we are living on our capital. In stating the matter theoretically, I drew attention to the possibility that a diminution of investment abroad might be accompanied by an increase of investment at home, and that, before we could infer from a diminution of our investments abroad that we were living on capital, we must go further, and demonstrate that there had been no equivalent increase of our capital at home. I must add, further, that this is no mere theoretical and argumentative point. Somewhat more than thirty years ago, when I was assisting Mr. Bagehot in the editorship of the "Economist," the question of an excess of imports being treated as a proof that we were, as a nation, living on our capital even then arose, and Mr. Bagehot's first idea on the subject was, that it was quite possible for the country to be parting with some of its foreign investments, and yet not to be diminishing its capital. The very things we were importing, he said, the food and the raw materials, were the articles required by labourers who would be employed in building the houses and factories, and making the railways, and executing other works which would constitute investment at home. The diminution of our investments abroad, and the consequent increase, for the time, of an excess of imports over exports, even if these things do take place, are thus no proof whatsoever that a nation is living on its capital. The test is whether, on the whole, we are diminishing our investments or not.

Tried by this test, then, we have simply to look, as far as this country is concerned, at the return of the assessments to the Income Tax. The assessments are, of course, assessments of the amount of income yielded, and not assessments of capital value, but the result is much the same. The bulk of the income, although some of it is personal, is really from property, and the value of property, of late years, as we know, has risen rather more in proportion than the increase of income. In former years I have, at different times, drawn out an estimate of the value of property in the country, based upon these returns of Income Tax, and may do so again, but it is unnecessary for the present discussion to go quite so far. We can deal directly with the returns. We find, then, that in the last ten years the increase of the annual assessments to the Income Tax has been from £631,000,000 sterling[1] to £759,000,000 sterling,[2] or an increase of £128,000,000 altogether, and of 20 per cent. in ten years. In some way or other, then, even if we have been diminishing our investments abroad in this period, we have not been expending our capital as a whole. On the contrary, if there has been a diminution of our investments abroad, there must have been a far more than equivalent increase of our investments at home. In other words, we must have at home far more houses, factories, machinery, railway and other roads, and stocks of furniture and other articles, one thing or the other, at any rate, than we had ten years ago, and we must have more in the aggregate, including securities both at home and abroad, than we had at the beginning of the period.

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[1] The actual figure of the assessments in 1890 was £669,000,000, but this included about £38,000,000 of income under Schedule B. which is not included according to the method now followed, and this amount has accordingly to be deducted in order to obtain a figure for comparison with the present time.

[2] This is the figure for 1899 only, not quite a ten years' period. The latest figure since published is £867,000,000 sterling.

It is especially to be observed that the increase of 20 per cent. is at a much greater rate than the increase of population in the period, which could not have been more than about 10 per cent. There is, consequently, an increase of the total capital per head as well as an absolute increase of the amount of capital, not considering the increase of the numbers of the people.

The Income Tax returns are not in such a form as to show separately the whole income derived from foreign investments, but I believe, if inquiry were made, and the whole income from foreign investments could be stated separately, it would not appear that the foreign capital itself has actually been diminished. The inquiry, however, would require a greal deal of elaboration. What we can say with certainty is, that there is nothing on the face of the figures to indicate any material diminution of our foreign investments such as would be implied if there were any diminution in amount to correspond to the excess of imports over exports.

The matter might be left at this point, but, of course, there are further observations to be made, as a wrong idea of this nature when once it gets into people's minds is not easily eradicated. It is, therefore, expedient once more to point out that the excess of imports itself, as a real expression of the balance of our trading transactions with other countries, is not correct, and that, in any case, a certain large excess is to be expected as the expression of the payment of interest on previous investments that we have made abroad. As regards the first point, that the excess of imports is not the same thing as the balance of our trading transactions with foreign countries, I need only refer to what I have urged before as to the exports not including the freight and other charges which become due to us in the course of our trade as ship-owners and commission merchants, yet these being charges with which we are as much entitled to debit foreign countries in the course of our foreign trade as we are to debit them with the so-called exports themselves. In order, therefore, to deduce from the excess of imports a notion of the balance actually due upon our trading transactions, we must add to the exports the value of the freight and other charges which we are entitled to bring into account, by which the apparent excess of imports over exports treated as a balance of trade would have to be enormously reduced, perhaps about one half. The remainder would correspond roughly to the amount of interest which we are entitled to receive upon our capital invested abroad. In reality, then, when analyzed, the excess of imports about which so many people are concerned does not at all imply that we are diminishing our capital abroad. It merely shows that our charges to foreign countries which the imports are sent us to meet are much greater than the so-called exports which appear in our trade returns, and that, in addition we have an amount of interest to receive without sending a commercial equivalent abroad. The facts which we find in studying the Income Tax returns showing no diminution of our capital, but, on the contrary, a very large increase, are thus in accordance with a correct interpretation of the import and export returns themselves. There is no question in any of them of the nation living upon its capital, but they all show, on the contrary, that our capital is steadily increasing, and they are all consistent with each other.

With regard to the increase of foreign banking money, or short loan money belonging to foreigners in London, it might be useful, in this connection, to point out the necessary limitations of any such foreign investments in this country. The amount of short loan money held by foreigners in London is necessarily conditioned by the limited nature of the short loan market itself. If the amount of money people want to borrow at call or at very short terms is itself limited by the nature of the transactions in which such money is useful, then the share of that short money held by foreign bankers and foreign merchants at any time, must equally be limited. Clearly they cannot be holders of all the short money in the market, because home bankers and others find it equally necessary and convenient to hold such money. At the most, then, foreign bankers and merchants can have but a share. Whatever, then, may be the amount of the short money borrowed and lent at a given time in the London market, say, perhaps, £200,000,000 to £300,000,000 sterling, foreign bankers and merchants at the outside can only be holders of a part, considering the magnitude of English banking money and the necessarily large proportion of that money which bankers must hold at call or short notice. My own impression is, that a sum of about £50,000,000 sterling held by foreign bankers and merchants in London and liable to be called at short notice would probably be a maximum amount, but on this head, of course, the audience before me will have better means of forming an opinion from time to time than I can possibly have. But whatever the amount may be, even if it should be such a maximum as £100,000,000 sterling, which seems far over any possible mark, the point to be observed is that any change in the amount of a fund of this nature from time to time can have little to do with the question of the nation living on its capital. The whole capital of the nation at the present time is probably not far short of £15,000,000,000 sterling, while the annual increase in ordinary times must at least be between £200,000,000 and £300,000,000 sterling.[1] A difference of a few millions, therefore, say, ten or twenty millions in the aggregate funds of the Short Loan Market or in the aggregate share of those funds held by foreigners, which does not exceed, probably, a total of £50,000,000 sterling, is a comparative trifle. Such changes may be very important in connection with the conditions of the money market at certain times, but they are not important in connection with a question like this as to a nation living on its capital. Were we, as a nation, to be living on our capital, the signs of it would be very different, and of a much more portentous character.

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[1] I have not made any recent calculations on the subject since the publication of my book on the "Growth of Capital," which dealt with the figures down to 1885, but, from the increase of Income Tax Returns, it is evident that there has been an enormous growth since then, justifying some such figure as that here suggested.

A different question seems to be raised by the investments on behalf of foreigners in the war loans lately issued, which would appear to indicate, especially in connection with the re-purchases of their own securities by foreigners, especially re-purchases of this sort lately made by Americans, that, in certain directions, English investment abroad is partly diminishing, and partly being set off by foreign investment in England. To the extent that such a process is going on, England would, of course, be diminishing its foreign investments on balance, though not its capital as a whole, and this would, *pro tanto*, be an explanation of an excess of imports. The amounts parted with in this way must, however, be very small in proportion to our whole capital, and looking at the ordinary processes of the Stock Exchange and the money market, I am of opinion that, on balance, we are still year by year increasing, and not diminishing, our investments abroad. We must not be guided in such matters by one or two symptoms only, or the phenomena of one or two years only, as there are great fluctuations to be noted. Whether there would be any means of giving a strict account seems, to me, very doubtful. There has lately appeared a remarkable and interesting statement by an American economist, Mr. Bacon, as to the position of America in recent years, during which its indebtedness abroad has been diminishing, and some of our younger economists would do well, perhaps, to make a similar investigation respecting the increase or decrease of English investments abroad, and the increase or decrease of foreign investments in England, which is another side of the same economic processes.

For our present purpose, however, nothing that is likely to be found in such investigations can affect the main conclusion that, as a nation, we are not living on our capital, which is established directly by the evidence of the increase of the national property, and of the increase of such property per head which we find in the Income Tax returns.

I propose next to deal with the question of nations wasting capital on war and armaments, perhaps the more practical of the two questions at the present time. What I have to say first of all on this head is to point out some conspicuous cases on record of the expenditure of vast sums for those purposes without capital being diminished, with capital, on the contrary, increasing all the time. Such cases do not show, of course, that capital may not be wasted in this way, but they raise a presumption that ordinary expenditure in time of peace, great as it may be, may not involve an actual diminution of the capital of the nations concerned, however mischievous some of the effects may be. There may, in fact, be a loss of means for the moment, for no one can eat his cake and have it, but momentary loss of means, however serious, is not the same thing as a diminution of capital, and must not be confounded with it.

The first illustration I have to give is that of the experience of England during the great war with France, at the end of the eighteenth and the beginning of the nineteenth century. During the latter part of the war especially, enormous sums were expended. The annual amount for some years towards the close of the war, including what was raised by loans as well as what was raised by taxation, amounted to about £100,000,000 sterling,[1] or not far short of that sum, and this was estimated to be equal to one-third of the aggregate annual income of the individuals constituting the nation at that time. We find, however, when we examine the records, especially the records of the Income Tax, that the amount of property in the country must have increased very rapidly during the entire period that this expenditure was going on. A few years after the beginning of the century, viz., in 1802-3, the average annual value of real property, according to the Income Tax returns, amounted only to about £35,000,000 sterling. In 1814, or thereabouts, the amount was £53,500,000 sterling. In other words, in about ten years' time the property of the nation, so far as it was derived from real property, increased about 50 per cent., and we may assume that there was an equal increase in the property itself.[2] All this, it must be remembered, was taking place during the strain of a great war, when the expenditure on armaments was at its maximum in this country. Of course, capital might have increased still more if there had been no war. The useful production of the nation might also have been much greater than it was if the labour of soldiers and sailors and those preparing clothing, food, and ammunition for them had been available for other occupations. The strain was undoubtedly very great. The facts stated in Porter's "Progress of the Nation" as to the non-increase of the yield of taxes in proportion to the increase of population between 1801 and 1821 are significant (see Porter, p. 496 *et seq.*). Still, in actual fact, the capital of the nation does not appear to have been encroached upon, and the resources of the

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[1] The actual figures were:

1811	£84,000,000
1812	89,000,000
1813	106,000,000
1814	107,000,000
1815	92,000,000

[2] See Mr. Goschen's "Report on Local Taxation," p. 69, No. 470, Session 1870.

nation must have been increasing all through this period. Great as the armaments were, the nation was by no means living upon its capital.

The next case I have to mention is that of the great civil war in the United States in the early 'sixties. In this case there were four years of war which must have cost the country very nearly £1,000,000,000 sterling. The actual gross outlay of the central government in the years of war and in the two years 1867-8, following the war, when war debts were, no doubt, still in course of payment, were:

1862	$566,000,000
1863	900,000,000
1864	1,295,000,000
1865	1,906,000,000
1866	1,139,000,000
1867	1,093,000,000
1868	1,069,000,000
Total	$7,968,000,000

This is equal to about £1,600,000,000; and, making deductions for the normal outlay, as it stood before the war, about £17,000,000 sterling annually, or about £120,000,000 in all, we should still have a sum of not far short of £1,500,000,000 as the apparent cost of the war to the Government. But these figures, apparently, include expenditures in repayment of debt already charged to the war, and the net outlay of the Government, not including such repayments, is, apparently, about the figure named.

Between 1860 and 1870, however, we find that according to the estimates made at each census in the United States, the aggregate property in the country increased from $16,000,000,000 to $30,000,000,000, or, say, from £3,200,000,000 sterling to £6,000,000,000 sterling, an increase in the whole period of £2,800,000,000 sterling. If, therefore, there had been waste of capital during the American Civil War, it must have been more than made good during the five years after the close of the war down to 1870, and the nation must in addition have created new capital to the extent of £2,800,000,000 sterling.[1] My conviction is, however, that at no time during the civil war itself could the capital of the nation have been diminished. Great expenditures were being incurred to carry on the war, and there was a great diversion of labour from other pursuits to carry it on, but the expenditure, great as it was, must have been borne out of the income of the country, and did not prevent the investment of new capital in houses, in factories, in railway construction, and in other public works.

The increase of capital here referred to, it must also be remembered, is an increase that took place after allowing for any diminution that may have occurred in the Southern States of the Union which were defeated, and were, no doubt, in a state of great exhaustion at the end of the war. Whatever diminution may have been due to this cause, the figures stated allow for it, the Southern as well as the Northern States of the Union being comprised in the return. Probably enough, the exhaustion of the south may have been exaggerated from the present point of view. The capital of the south was not, in fact, destroyed by the war any more than the capital of the north, because it consisted so largely of land and property which could not run away, and what was injured was really the fringe of the capital, and not the main capital itself. The moment peace was restored means were found to resume industry almost as if there had been no war.

The next illustration I propose to give is that of the Franco-German war, which involved an enormous outlay during the short period it lasted and, probably, cost France, according to a calculation which I made many years ago, shortly after the war itself, about £700,000,000 sterling.[1] This includes every kind of loss, direct and indirect, as far as I could calculate, which France sustained. But the whole of this amount was not a loss of capital to France, the net loss on that head being about £600,000,000 sterling, including the payment of the indemnity and the cession of territory, about £264,000,000 altogether, which were the result of the war. The case of France, however, was a very special case of loss of capital. The experience of Germany was quite different, the calculation being that Germany, instead of losing by the war, gained about £150,000,000 sterling, and gained in capital even more than that, about £174,000,000 sterling. If we state the gain of Germany against the loss by France, the total loss of capital even by the Franco-German War to the two nations concerned was probably not over £400,000,000 sterling, or about £200,000,000 apiece. Much of the burden of the expenditure was, in fact, borne at the time out of the income, and the loss of capital, in whatever way it may be calculated, was not nearly so great.

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[1] Some deduction ought perhaps to be made from the latter sum on account of the depreciation of paper money, which was the money of the country in 1870, but after all allowances the increase would still be enormous.

We may say, perhaps, that the loss of capital in the great Franco-German War amounted to no more than a few years' ordinary accumulation of capital in the countries concerned, and it was in fact made good more quickly than was commonly anticipated in 1872. The recovery in France, especially, was prodigiously quick.

When we get such figures in connection with great wars it is, perhaps, unnecessary to refer to the kind of loss which occurs in the little wars which this country has had to carry on at different times. Wars in India, apart from the fact that they have mostly been paid for out of the Indian Exchequer, a war like the Abyssinian War, or West African Expeditions, or Chinese entanglements, have, obviously, occasioned the expenditure of sums which are quite insignificant compared with those which have been mentioned. If the great wars did not involve loss of capital or waste of capital, clearly the little wars need hardly enter into consideration. The South African War, from which we are now emerging, has called for a more serious effort. The war estimates for two years in succession have been close upon £90,000,000 sterling annually, as compared with £20,000,000, which was the figure before the war. The whole of the difference is not due to the war, but we are dealing here with the question of armaments in the most general fashion; and the fact of £90,000,000 sterling for Army estimates, added to about £30,000,000 more for the Navy at the same time, makes a total expenditure on armaments for two years of about £120,000,000 a year. This is even a larger figure than the amount that was spent annually about a hundred years ago, in the great war with France. We have seen, however, that even the great war with France, notwithstanding the much smaller resources of the country at that time, compared with the present, did not, in fact, result in any waste of capital, but the reverse, the accumulation of capital going on in the country the whole time. It is not surprising, therefore, to find that the recent expenditure on the South African War hardly seems to have disturbed the ordinary course of business in the country. Whatever the exact proportion of the outlay to the resources of the country may be, we have evidently been paying for it out of income, and not out of capital. Of course, it is quite true that the Government as a Government has been borrowing largely in order to meet the expenditure. The borrowings, apparently, amount to something over £100,000,000 altogether in about two years. But, although the Government borrows, it may none the less be quite true that, as far as the whole community is concerned, the entire outlay is defrayed out of income. Those who provide the Government with the money provide it out of income, and not out of capital, and there are no doubt large additional savings and investments going on at the same time.

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[1] See *supra*, vol. i., "The Cost of the Franco-German War."

We come finally to the question of the expenditure upon armaments in time of peace, which are the subject of those remarks by American and other critics referred to at the beginning of this paper, to the effect that European nations are at a disadvantage, economically, as compared with America, in consequence of these peace armaments. What has been said as to the expenditure in time of war itself, and the possibility of capital accumulating notwithstanding, obviously suggests that, perhaps, the nature and effects of expenditure upon armaments in peace time have not been fully considered by some of the economists and statisticians who have made such remarks. But we may look at the facts directly. To take four of the great European nations, we find that the outlay of these four nations, England, France, Germany, and Russia, for military and naval armaments in time of peace, may be stated something as follows:

	Army.	Navy.	Total.
England[1] . . .	£30,000,000	£30,000,000	£60,000,000
France	27,000,000	12,000,000	39,000,000
Germany . . .	32,000,000	7,000,000	39,000,000
Russia	30,000,000	7,000,000	37,000,000

These are the figures taken from the latest Budget statements of the respective Governments. I fear that they are under-statements to some extent, as it is somewhat difficult in these matters to get the "true truth" out of the official documents. But even if we add to them a considerable margin for error, or in consequence of the very latest figures of actual expenditure not being available, say, if we add altogether 10 or 20 per cent., we should still have figures that are quite inconsiderable, I believe, compared with the aggregate income and capital of the nations concerned.

In our own case the comparison would be with an aggregate income of not less than £1,500,000,000 sterling, Germany with an aggregate income of about £1,000,000,000, if not more, France with an aggregate income, also, of £1,000,000,000, and Russia with an aggregate income that must also now be closely approaching, if not exceeding, £1,000,000,000.[1] The question is whether it can be said that the expenditure of such sums is likely to trench in any way upon the capital of nations which enjoy such large incomes. Clearly, we may say, in our own case, that an expenditure of £60,000,000 or even £80,000,000 sterling out of about £1,500,000,000, that is, an expenditure of 4 or 5 per cent., is an outlay which can well be met out of income. No doubt there are all kinds of other outlays connected with the Government of a great country, but many of these outlays, especially those connected with local government and those connected with Post Office administration, are really outlays of a reproductive character, and hardly involve even the question of burden upon the community affected. The really serious burden for a State is always Army and Navy expenditure. But in the case of England, the burden, in time of peace, after all, amounts to no more than has been stated, and all the consequences of the mischief of bloated armaments and the rest, in time of peace, as far as this country is concerned, must arise from the expenditure of about 4 or 5 per cent. of our income only. With Germany and France, it will be seen, the position is much the same, although, in their case, it has to be considered that, probably, the taxable margin in proportion to the aggregate income of the people is smaller than it is in our own case.

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[1] Excluding India and the Colonies.

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[1] I do not support these figures by detailed calculations, which appear unnecessary for the present purpose. I may refer to the calculations of Mr. Bowley as justifying the figure stated for the United Kingdom, justified as they are by the previous calculations of Dudley, Baxter and others, and by considerations of the numbers of the people, the income assessed to Income Tax, and the average earnings of the working classes; while similar calculations can be made for other countries.

A great deal is made, in the discussions on these subjects, of the fact that in France and Germany, owing to conscription, the outlay stated in the Budget is much smaller than the real burden on the people, because the soldiers are obtained at less than cost price, and although the Government does not pay the money, the nation sustains the loss of the withdrawal of so many hands from employments where they would be paid more than they receive in the Army. I cannot find, however, that any addition to be made to the expense of Army and Navy in Germany and France, on this head, would really be very material for the purpose before us, while it is also maintained, in Germany especially, as you are no doubt aware, that the training in the Army is economically beneficial to the recruits who are conscripted, and that, finally, there is no loss at all to themselves or to the nation in connection with the conscription. With regard to Russia, the case is, perhaps, more serious, because here the margin for taxation, in proportion to the gross income of the people, is, probably, much less than it is in the case of the three other nations referred to. As far as I can judge, the margin of taxation in Russia must be very small indeed. Still, even here, there is, apparently, no question as to the expenditure on armaments trenching on the *capital* of the country. There is no reason why the whole amount should not come out of the annual income.

These statements might be followed in detail by an examination as to the growth of indebtedness in the different countries, no matter what the cause may be; but I am anxious to concentrate attention on the main point, and the question of debt brings in so much the question of financial management that it would encumber a paper like this to discuss it in detail. There has obviously, however, been no such increase of debt lately as to involve any formidable addition to the annual burdens on any of the people concerned. Of our own debt I need say nothing. The French debt was added to immensely by the Franco-German war; afterwards there was a great addition in consequence of the schemes of public works, but of late years the additions have been inconsiderable. Ten years ago the annual interest on the funded debt in France was about £34,000,000. Now it is about £32,000,000 only, showing no increase of annual burden at all. In Germany the whole Imperial Debt, after thirty years of existence, was still about £120,000,000 only until the present year, and the annual charge inconsiderable. In Russia the annual charge ten years ago was about £26,000,000, and is still only about £27,000,000. One reason, no doubt, is the fall in the rate of interest of late years, a reason which comes close home to a banking audience; but whatever the cause, we have here to do with the fact that leading nations have not sensibly been adding to their annual burdens in the shape of interest on their debts.

In conclusion, then, I must dissent, in the strongest way, from a great deal of the criticism to which the expenditure upon military armaments in time of peace has been subjected on the score of their diminishing the national capital. A good deal of the criticism is the reflection, I believe, of ideas which were formed in times of great stress, such as those which existed at the beginning of last century. Armaments are still talked of in a way which was justified at a time when great burdens were imposed upon the people, and almost as much was taken by the tax collector out of their pockets as possibly could be taken. The point, however, is that the burden of armaments in time of peace, as happens even with the much greater burden which has to be borne in time of war, may fall exclusively on the income of the people at the time, especially when the charge is so moderate, as it is in our own case, as not to be more than 4 or 5 per cent. of that income, and there is no question whatsoever as to national capital itself being expended or wasted. There is also an error in what seems to be a common supposition on the matter. I have heard it said that an additional saving, equal to 4 per cent., or even less than 4 per cent., of the aggregate income of the nation would be an enormous addition to the annual savings of the country, and would, in the course of a few years, have a great cumulative effect. What I must point out, however, is that there is no ground for believing that a cessation of the expenditure on armaments or the cessation of Government expenditure of any kind defrayed out of taxes would bring with it the saving and investment of an equivalent amount as capital. On the contrary, people not paying the taxes would be able to spend the amount on something else, and it does not at all follow that the whole amount would be saved and invested, although a certain small proportion, bearing the same proportion to the taxation remitted as the present savings bear to the total income of the country, might be so saved and invested. As a matter of fact also, it is common knowledge that neither Germany nor France has been fettered in any way for many years past by the lack of capital to develop their industries. The alleged effect of the expenditure on armaments is thus not merely contrary to theory, but is contradicted by the actual experience of many years.

It would be natural to complete this statement by entering into the statistics of the actual growth of capital in each of the countries concerned. I have already had occasion to deal with this matter, however, as far as this country is concerned, in connection with the question of our living upon our capital as the result of the excess of our imports over our exports in international trade, and it would take us too far afield, perhaps, to enter into a statistical inquiry with regard to the other countries I have named where statistics are not so easily available bearing upon this particular point of the growth of capital. The importance of studying the question of the growth of capital, however, is never to be lost sight of in these discussions. The onus of proof that expenditure on armaments in time of peace, to the extent of the actual expenditure of different nations that we see, tends to a waste of national capital, lies upon those who dwell upon the mischief of the armaments themselves. I have never yet seen, however, any attempt to show that the capital of any great military countries such as Germany, France, or Russia, has been diminished, or even the growth of capital greatly checked, by such expenditure. There is a constant assumption that great expenditure on armaments must mean such a diminution of capital, or check to its growth, and there is no attempt to prove the case by actual experience.

The final conclusion on the whole matter is, that the facts, when examined, hardly support the common talk as to this country living on its capital in its transactions with foreign countries, and as to nations wasting and expending their capital by means of excessive armaments. As to the former point, we have found that the whole talk on this subject which we have been criticising is sheer nonsense. The phenomena, when examined, do not even suggest that we are living upon our capital at all. As to the second point, the conclusion is that nations in their armaments may go very far indeed without trenching on their capital, and, in particular, they may go very much further at the present time than any nation is now doing. In former times countries have gone through great wars and great catastrophes, and have been found a few years after to be in possession of much more capital than at the beginning of the catastrophic period. At the present moment nations are expending 4, 5, and, perhaps, in some cases, 10 per cent. of their income upon armaments, but such expenditures, however serious, do not involve necessarily any waste of capital, because they can be borne out of income. In some cases, in past times, particularly in the case of this country during the great war with France, the strain upon income was undoubtedly prodigious. The loss and suffering entailed were enormous, and people would have been much better off if they had had no war to pay for. What I have endeavoured to show, however, is that the question of loss and suffering is one thing, and the question of waste or diminution of capital quite another thing.

Having stated this conclusion, I desire to add one or two practical comments. I have rather avoided comment in the course of the paper, believing it to be essential to arrive at the facts, whatever the commentary may be, but comment itself may be useful in order to avoid misapprehension. It ought not to be inferred from anything that has been said that the question of large military preparations is a matter of indifference to any country, but the inference may be drawn all the same, however erroneously, from an argument intended to cut down some of the usual statements on the subject and to show that some of the alleged mischiefs of these armaments do not, in fact, exist. It may be useful, therefore, to state some of the practical lessons of the facts, as ascertained.

I fear, then, we must conclude that there is no practical advantage in arguing against the continuance of bloated armaments by the great military powers, or against the necessity of corresponding armaments by more peaceful powers like England. The military powers have no idea on the subject but that of developing their military strength to the utmost practical limit, and to show that the margin of their resources is yet unexhausted is to show that they may continue the game. It would be a different matter if the nations they represent were exhausting their capital, so that their taxpaying power was diminishing; but the contrary is the case. The Governments are quite aware that their subjects would have more to spend if taxation were to be diminished, but they consider expenditure on armaments necessary to the State and, for them, that is the end of the question. So long, therefore, as the yield of the taxes is maintained, the military powers are practically certain to go on maintaining and adding to their armaments. This entails corresponding outlay on the part of other powers more disposed to peace, especially on the part of a power like England, which has a foot in every continent, and depends on predominance at sea for its very existence as a State. Whether other powers like it or not, in fact, the great military powers, in this matter, set the pace. Unless they are to be at the mercy of the military powers, which would obviously be a dangerous position, the industrial and peaceful powers must be prepared to show fight.

The second inference I would draw is that in the game of preparation the more economic and peaceful powers ought to be able to keep pace while straining their resources less than the military powers themselves. It is easy to see that, in spite of the great increase of our Navy in recent years, and the increase in the Army, apart from the war in South Africa, the expenditure burdens the United Kingdom much less in proportion than the expenditure for the same objects burdens our military neighbours. We could add greatly to that expenditure and still be no more burdened in proportion. It will be unpleasant to spend the money. There is so much else to be done with the amount if it were available. But if the expenditure is judged necessary it can be met by present sacrifice and without trenching on capital.

A third inference is that, as the expenditure is unavoidable, the best should be made of the necessity, and if, as is alleged, part of the sacrifice called for may be repaid by the benefits which extensive military training ought to confer on the population of the country, then an attempt ought to be made so to arrange matters as to procure the largest indirect return for the inevitable outlay. The value of athletic exercises to the population in universally recognized.

Military training, however, according to the common belief in Germany, is also valuable; and the development by a nation of its Army and Navy need not, consequently, be a pure loss in an economic sense. At any rate a people which is called on to devote a part of its energies to making an Army and a Navy may be asked to consider, before grudging the expenditure, whether the things that would practically be obtained if the amount spent were free for other objects would be so much more valuable to the individuals than the military training and preparation itself when properly organized.

Last of all, it is a set-off, so far, to the cost of great armaments in time of peace that they are an undoubted insurance against war, with the wholesale expenditure and loss of life and disease which a state of war brings. When various great powers are strongly armed, and none can hope for a speedy victory by surprise, such as Germany achieved over France in 1870, then peace is far more likely than if ambition were to be encouraged by tempting opportunities. In this way we may affirm that the almost unbroken peace in Europe since 1870 is due to the very armaments in time of peace which have been so freely condemned. It would be better, of course, to have an out-and-out peace instead of an armed peace which, in some respects, is little better than a truce, but if a choice must be made, then an armed peace is better than war, and Europe has been well repaid for its armaments for many years by the possession of actual peace.

What the final upshot will be of all these warlike preparations it would be useless to speculate. One Government after another may not improbably grow weary, and the competition will become less keen, equality and not superiority being aimed at by each power. On the other hand, it is within the range of possibility that competition will become so excessive as to bring out the very mischief of waste of capital alleged of the system as it actually exists. But these are guesses for the future. We have to deal with an actual situation in which a less severe call is made on our energies, and where we may consider what our preparations ought to be without running any risk of outlays beyond what may well be borne.

XXVII.

A FINANCIAL RETROSPECT, 1861-1901.[1]

Introductory.

IN consequence of certain letters of mine which appeared lately in "The Times," on the "Financial Outlook,"[2] some of my friends on the Council of this Society were good enough to suggest that a short statistical paper, resuming the figures for the last forty years—the past period covered by the letters,—would be useful to the Society by way of record, and would allow of Members discussing from the financial point of view the topics of economic development and national progress, which have so frequently been the subject of debate at our meetings. In a moment of weakness, I fear, the suggestion was accepted, and the present paper is the result. Accidentally as the suggestion has been made, there is a good reason of substance for making 1861 the starting point of such a retrospect. In that year the Free Trade work of Sir R. Peel and Mr. Gladstone had been practically completed. The last great clearance of the tariff, consequent on the Cobden Treaty of 1860, had just been made; the great struggle respecting the paper duty had just been finished; and our tax system was free of any duties for the purpose of protection, if we except a small timber duty, and the registration duty of a shilling per quarter on the import of corn, which were exceptions of a formal, and not of a material, kind. The disturbance of our financial arrangements caused by the Crimean war had also ceased to leave its mark, or nearly so, by 1861. What we have to observe then is the development actually taken by our finance under a Free Trade *régime* all through, and in general circumstances of great material prosperity.

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[1] Read before the Royal Statistical Society, 18th March, 1902.

[2] See the "Times" of 7th, 9th, and 10th January, 1902.

The tables which have been prepared, it will be found, are extremely simple in form. Nothing more has been done than to put together, from the Statistical Abstract mainly, the figures of actual revenue and expenditure and other financial data for a particular year, at intervals of ten years, since the beginning of the period, adding in some cases the estimate for 1901-02, so as to make the comparison more up to date. In a more elaborate study the figures for each year should have been inserted, and averages for groups of years stated; but the present arrangement is simpler and less confusing, while if error arises occasionally, in consequence of the single year in some cases not corresponding with the average at the period to which it belongs, a reference to the very familiar Statistical Abstract can easily be made. But no great error, I believe, arises in this way, although in one case, 1871, the figure of expenditure is rather understated, the total being lower than it would have been if any other one of several years before and after had been selected. The changes, however, between the earlier and the later years are so great that not much turns on the excess or diminution of any particular year compared with the average. In addition to the financial tables proper, supplementary tables are added for convenience of reference, dealing with the factors of population, production and consumption, which are obviously matters requiring consideration in any study of financial questions. It is not proposed, however, to give a formal account of these tables as is done for the financial tables themselves.

The General Growth of Expenditure.

Taking the tables in their order, I begin by noticing Tables I. to IV., dealing first with the revenue and expenditure of the Imperial Government of the United Kingdom, in the gross, and then specially with the expenditure. The lesson of the first table is striking. Expenditure increases from 72.8 million £ in 1861 and 69.5 million £ in 1871, to 80.9 million £ in 1881, 87.7 million £ in 1891, and then in 1901 to 183.6 million £, which is exceeded by the estimates of the current year. Revenue increases in much the same way, lagging a little behind in the last period of all. The figures are 70 million £ in each of the years 1861 and 1871, 82 million £ in 1881, 89.5 million £ in 1891, and 130.4 million £ in 1901, and finally 142.5 million £, estimated in the current financial year. The change from the earlier period is most striking, and practically it has come with a rush in the latest period of all, that is since 1891. The explanation on the surface is that the recent growth is mainly due to the war in South Africa. The sum of nearly 70 million £ is put down for war expenditure in South Africa and in China in 1901, only a small part being for China. But in a general retrospect such as the present, too great stress must not be laid on such explanations. The present period is obviously different from the past, whatever may be the cause. Possibly it may be found after a few years that the figure of 180 to 190 million £ exceeds the normal expenditure of the period into which we have come; but as prudent men we must accept the warning for the present, and not fix upon a much less figure than what has actually lasted for nearly three years, say a less figure than 150 million £, until there is experience of the reduction.

This is not the whole account of the growth of expenditure. Appended to Table I. is an account of the revenue received by the Imperial Government, and handed over by them to the local authorities of the country without appearing in the ordinary budget at all. This was an arrangement commencing about 1887, when some services hitherto charged on the Imperial Budget were handed over to the local authorities along with certain revenues. Clearly in a fair comparison with a former period the expenditure on such services ought still to be shown. The total money thus collected for the local authorities and handed over to them now amounts however to close upon 10 million £, which the Imperial Government really pays, although it is not seen in the ordinary budget. In putting the current expenditure at a very high figure, therefore, compared with 1861 and 1871, and disregarding a good deal the special explanation of war, we are acting safely. There must be a very high figure when normal conditions are established.

Before analysing the growth of expenditure and revenue in detail, we may inquire generally as to the relation of the new burden to the resources of the country. The first table shows that the aggregate expenditure per head of population, after falling from £2 10*s.* 8*d.* in 1861 to £2 4*s.* 3*d.* in 1871, and then rising slightly to £2 6*s.* 4*d.* and £2 6*s.* 6*d.* in 1881 and 1891, has all at once jumped up to £4 8*s.* 6*d.* and £4 12*s.* 2*d.* per head, not including the extra 10 million £ of expenditure which has dropped out of the Imperial Budget. A natural presumption from these figures would seem to be that the national resources are more severely drawn on than they were, as is undoubtedly the case when we make comparison with a recent date, such as 1891. The matter will be discussed more fully afterwards; but it may be useful to point out, even at this early stage, that the maintenance of a low figure of expenditure per head for so long a period as from 1861 to 1891 itself implies an enormous reduction of the burden of Government in proportion to the resources of the people. The period, as we all know, was one of great and continuous prosperity, the wealth of the community increasing fast. It is quite possible, therefore, that with £2 6*s.* 6*d.* per head in 1891, the people were much less burdened than with £2 10*s.* 8*d.* per head in 1861, and that they would be no more burdened now than they were formerly, even if there should be a considerable increase in the expenditure per head. The point is one for investigation and not for assumption on any side. That there has been an enormous increase of wealth is however obvious from two sets of facts, which are corroborated by many others. First, there has been an enormous increase in the consumption of such articles as tea and sugar,—in the former case from 2.69 lbs. per head in 1861 to 6.11 lbs. per head in 1900, and in the latter from 35½ lbs. to 88 lbs. per head (see supplementary tables), increases which would have been impossible without a material improvement in the well-being of the masses. Next there has been an enormous increase of the yield of a penny of the income tax, from £1,100,000 in 1861 to £2,400,000 at the present time (see Table IX.), although in the interval the lower limit of the tax has been raised from £100 to £160, and the limit up to which abatements are given has been raised from £150 to £700. It cannot be assumed then that the country is now burdened more in proportion to its resources by the expenditure of the present time than it was by the expenditure of 70 million £ in 1861. Both sides of the account have to be looked at, and not one only.

The growth of expenditure about 1861, it may be interesting to note, was discussed at the time just as the expenditure of the present day is being discussed in some quarters. On 3rd June, 1862, Mr. Stansfeld moved a resolution of protest against growing expenditure, and was strongly supported, Mr. Disraeli dwelling on "bloated armaments," while Cobden and other authorities joined in the onslaught. There was, however, no real discussion of what the expenditure of the State should be and for what purposes, and of what could really be borne by the community, any more than there is now or ever has been at any time in my recollection. The nearest approach to comparisons of that kind was made by Mr. Stansfeld, who described the expenditure of 70 million £ as equal to a tax of 6*s*. in the £ on the income tax income of the country, and who said that this, at £1 per week per family, would be equal to the maintenance of seven million persons of the working classes for a year. Six shillings per £ on the income tax at £2,400,000 per penny, the present rate of yield, would give an expenditure of no less than 173 million £, which approaches the figure of the present time, while the proportion of the working classes that could be maintained for that sum, owing to the increased income of the class, now far more on the average than £1 per week per family, would be diminished and not increased. Such comparisons, however, are hardly to be encouraged, as the expenditure for Government is necessarily the first charge upon the resources of every community, and if it has to be met, no help is given in its proper administration by showing that, as with Mrs. Caudle's £5, something else could be done with the money.

Analysis of Increased Expenditure and Revenue.

Analysing the expenditure in detail, we may notice the following points:

1. The annual charge for the debt (Table II.) appears to have considerably diminished. The figure is 26.3 million £ in the budget of 1861, and in the estimate for 1902 it is 21.6 million £. This is subject to the observation, of course, that the annual charge in 1861 included a considerable sum for the reduction of debt, while the annual charge at the present time does not, but there is clearly no question that the annual charge, apart from repayment of debt, has rather diminished. The capital has diminished, there has been some reduction of interest by conversion, and there will shortly be a further reduction of interest of the same kind to

be set against the actual increase of debt during the last few years.

2. The Civil Service expenditure of a miscellaneous kind accounts for very little of the large growth of expenditure with which we have been dealing (Table IV.). The Financial Abstract now shows in a line the whole of the expenditure for civil government, including the Civil Service estimates and the charges on the Consolidated Fund, apart from the debt charge, but excluding the charges for the collection of revenue and for the Post Office. The figure of this expenditure last year was £24,854,000, and if we carry it back, we find that the corresponding figure in 1861 was £9,659,000. This is a considerable increase, nearly £15,000,000, but on further analysis we find that the increase in the education charge alone was from £1,097,000 to £12,662,000, or nearly 12 million £ of the total, and that the miscellaneous Civil Service expenditure—the general charge for the civil government of the country—has only increased from £6,266,000 to £10,623,000, or, including Consolidated Fund charges, from £8,562,000 to £12,192,000, or about 3½ million £. This is again subject to the observation above made as to services transferred to local authorities, and to some doubts as to the manipulation of the estimates, by which the expenditure is partly concealed; but, making all allowance for such observations, the facts appear to show that a common impression as to the formidable growth of Civil Service expenditure, on which about fifteen years ago Lord Randolph Churchill thought he could save 10 million £, is hardly well founded. Lord Randolph Churchill, in fact, sacrificed his career for a pure blunder.

3. The growth of education expenditure in particular, to which attention has been drawn, is an undoubted makeweight in the present position.

4. The charge for collection of the revenue, apart from the Post Office, like the Civil Service expenditure generally, has remained comparatively stationary, being

£2,834,000 now, as compared with £2,569,000 in 1861. In other words, Customs and Inland Revenue, though we collect double the revenue, cost hardly more now than they did in 1861.

5. The largest increase in civil expenditure, besides education, is in the Post Office department, where the expenditure has risen from about 3 million £ in 1861, to 13½ million £ in 1901. This is expenditure, as is well known, which is accompanied by a corresponding growth of revenue, and implies a corresponding increase of services rendered to the country. Even if it grows, therefore, out of proportion to the growth of population and income, it is a beneficial expenditure, and need be viewed without concern, although it may involve an increase of the charge per head of population.

6. We come finally to the real question involved in the growth of expenditure, viz., the growth of charges for Army and Navy. It is these charges, including the charges for actual war, which account mainly for the whole growth between 1861 and 1901. The increase in Army and Navy (see Table III.) is in fact 90 million £, if we compare 1861 with the present time, viz., from just over 31 million £ to just over 121 million £, and it is no less than 100 million £ if we compare 1871 with the present time, viz., from 22½ million £ to just over 121 million £. There appears indeed to have been a decided falling off in the charge for the Navy, especially between 1861 and 1871, so that 1871, as already mentioned, becomes an exceptionally low year to start from. What will surprise some of us is that Army and Navy were kept under, as they appear to have been, down to as late a date as 1891, so that then as compared with 1871 they show no greater an increase than about 10 million £.

There is, unfortunately, no doubt about the increase of 100 million £, or thereabouts, since 1871. We are spending over 121 million £, where we spent just over 22 million £ in 1871. Of this increase, as already suggested regarding the growth of expenditure generally, a large part must be really permanent, but the point should be specially considered, as a certain part of the general growth of expenditure, viz., the expenditure for education, and for Post Office, which is also in all probability permanent, is in an entirely different category from expenditure on armaments. We should disregard then, I believe, the classification of 70 million £ of this army and navy expenditure as being for "war," and impliedly, therefore, temporary. The question is one of opinion, and I should deprecate a very full discussion here, as involving questions of politics; but the overruling facts appear to be that a war expenditure for two years amounting to about 70 million £ a year, followed by an estimate of 40 million £ for the next year, must be held to indicate a situation of a chronic character, implying expenditure of a similar nature for some years to come. The expenditure, in fact, is not so much for war as for the more or less permanent occupation of a difficult country, which unavoidable circumstances, I for one should admit, compel us to occupy, where there are good reasons also for believing the burden will diminish, and diminish greatly, in time, but where improvement is conditional on our facing the evil at its worst. What we have really to face then on account of South Africa is a costly army of occupation, with corresponding charges for an army at home to send reliefs to it as we now send reliefs to India and our other colonial possessions. As to Army and Navy generally, also, the international position appears to be such that for some years to come the British Empire must exhibit a great and unwonted development of force. The reason is that we are surrounded as we never were before by great military powers who possess powerful and increasing navies; that we have extensive land frontiers in all parts of the globe, with active enemies near them, especially in Asia and Africa, such as we never had before; and that our staying power, if we are checked, owing to our absolute dependence on sea communications for needful raw material as well as food, and for the sale of the productions by which our people live, may be unexpectedly curtailed. Hence we must make preparations for eventualities, not only as if we were one of the unfortunate continental States who are perpetually in terror of the spectre of invasion, and whose case we have been accustomed to lament from our superior position as girt by the inviolate sea; but we must prepare as if we were exposed to even greater dangers than any continental neighbour. Our whole position has been revolutionised internationally, and as like causes produce like effects, we must go through the experience in the way of military preparation which our continental neighbours have gone through.

The only question is as to the exact figure at which the permanent increase of Army and Navy expenditure should be put. It will probably be something less than the 121 million £ at which it now stands, comprising one-half for ordinary Army and Navy expenditure and one-half for so-called war. The estimates for next year provide for about 100 million £ only. But take it as a rough guide that every 100,000 men of regular army and navy, allowing for increased pay, must cost about 13 million £ a year, and that new ships and repairs, merely to keep our fleet going, must cost about 15 million £ annually, we can easily calculate what large sums must be spent. Mr. Brodrick estimates the regular army, including India, at 250,000 men, but this omits South Africa, and with South Africa the numbers will certainly not be less than 300,000, omitting India altogether. At the rate of 13 million £ for each 100,000 men, this will mean an expenditure for army alone of nearly 40 million £, apart from charges for auxiliary forces and the like. The navy, again, has nearly 130,000 men, involving at the above rate a charge for the *personnel* of about 17 million £, besides 15 million £ for repairs and renewals of the *matériel*, and charges for fortified coal depôts, etc., let alone an increase of the fleet to keep pace with foreign fleets—total over 40 million £. As I have often insisted, therefore, I see no way by which, in fact, charges of 40 million £ each for Army and Navy are to be avoided in future, and practically we may consider ourselves fortunate if the charge should ever again be less than about 100 million £ in all.

These are very different figures indeed from the 20 to 30 millions which were the occasion of the lively debates of forty years ago. But we have travelled far from that time, and that is all that can be said.

Analysis of Growth of Revenue.

Analysing the growth of revenue in detail, we may notice the following points:

1. No part of the increase of revenue since 1861 can be ascribed to the imposition of new taxes or the increase of existing taxes. The increase in all, comparing 1901 with 1861, is from 70 million £ to 130 million £; but the whole of this extra 60 million £ is due exclusively to the larger yield of existing taxation, and not to any new burdens. This appears clearly from Table XIII. in the appendix, summarizing the well-known table in the Statistical Abstract, which gives the taxes repealed or reduced, and imposed or increased in each year, with the estimated loss or gain to the exchequer in a complete year, and other particulars. There have been many ups and downs in the tax list in the interval, but finally the reductions all told amount to 71 million £, and the increases to 62.6 million £, leaving a net reduction of 8.4 £, which ought to be added to the increase of revenue above stated to show what the real growth has been. The growth must have been even larger. A reduction or increase of the same rate of tax, when revenue is growing rapidly, is necessarily represented by a smaller amount of taxation in an earlier than in a later period. When reductions take place, therefore, in the earlier part of the period over

which the comparison extends, and increases in the latter part, the comparison of the amounts of taxation affected does not quite show the real reduction that has taken place, but it shows a figure that may be a good deal less. In the last ten years there is an increase of taxation of no less than £19,500,000 on balance, but the same changes of taxes in the first ten years of the period would have come to a good deal less money, and it is this amount which should be compared with the early reductions, so as to show what the real growth of revenue has been.

If we made the comparison with the estimates of the current year the result would be much the same. We should have to add about 11 million £ for the increased taxes in last budget, thereby showing a small increase of taxation on balance to be deducted from the apparent growth of revenue from 70 million £ in 1861 to 142½ million £ in the current year. But this apparent increase, according to the explanation above given, would be far more than the real increase, and on balance there would be no such increase. We are quite within the mark in saying that the doubling of the revenue since 1861 has been effected without any increase of taxes on balance, but rather along with a decrease.[1]

2. The second point which is obvious on the surface of the tables is the fact of a great change in the relative importance of different branches of the revenue in the total product. A glance at Table V. shows that, while Customs in forty years have increased from 23.3 million £ to 26.3 million £, or about 15 per cent.; Excise from 19.4 million £ to 33.1 million £, or 70 per cent.; and Stamps (excluding death duties) from 4.9 million £ to 7.8 million £, or 57 per cent.; we find income tax increasing from 10.9 million £ to 26.9 million £, or nearly 150 per cent.; death duties from

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[1] No difference would be made in this conclusion by including the revenues handed over to local authorities. The net reduction of taxation shown would be so much less, but the growth of revenue would be so much greater.

3.4 million £ to 13 million £, or 286 per cent.; and Post Office charges from 3.4 million £ to 17.3 million £, or over 400 per cent. If the current year were taken into account these contrasts would be still as marked. Certain additions have been made to Customs and Excise, so that they exhibit a larger percentage of increase than was the case a year ago; but income tax has also been added to, and the comparison shows up much the same. Leaving aside the Post Office, where the charges stand by themselves as being largely charges for services rendered, and not bare taxation, we may say broadly that, during the last forty years, income tax and death duties have largely increased in relative importance among the different branches of revenue, and Customs and Excise and Stamps have declined.

The comparison would be still more significant if we started from 1871 instead of 1861. Here we find the contrast in the growth of the branches of revenue mentioned to have been as follows:

FIRST GROUP.

	1871.	1901.	Increase.	
			Amount.	Per Cent.
Customs . . .	20.1	26.3	6.2	31
Excise	22.8	33.1	10.3	45
Stamps	3.6	7.8	4.2	116
	43.5	67.2	20.7	44

SECOND GROUP.

Income tax . .	6.4	26.9	20.5	320
Death duties . .	4.8	13.0	8.2	170
Post Office . .	5.3	17.3	12.0	226
	16.5	57.2	40.7	247

Thus, while an addition of about 21 million £ has been made to the first three branches of revenue in thirty years, an increase of less than 50 per cent., the addition in the case of the second group is almost exactly double, or 41 million £, and has been at the rate of 250 per cent. Here, again, the effect of the contrast would hardly be mitigated by including the additional taxes imposed a year ago. The additional weight thrown on income tax and death duties "leaps to the eyes."

3. The next point must be that this change in relative position among different branches of the revenue has not occurred automatically in any way, that is by some taxes in course of time, through a natural development, becoming more productive than others. It has occurred, on the contrary, at least very largely, as the result of legislative and other changes. If we analyse, in fact, the list of taxes repealed or reduced, and taxes imposed or increased, to which reference has already been made, we find that the reductions in the early period are largely reductions of duties of Customs and Excise, and the increases in the later period are largely increases of income tax and death duties. On this head the list of rates of duty on principal heads of Customs (Table X.) appears instructive. There is a slight increase in the charge for spirits; a slight increase on tobacco generally, but a decrease in the rates for cigars and snuff; a great decrease in tea, from 1*s.* 5*d.* to 6*d.* per lb.; a great reduction in sugar, from 18*s.* 4*d.*, or 2*d.* per lb. on refined, in 1861, to about ½*d.* per lb., in 1871, while after that the heading disappears altogether, only to be restored very partially in the current year; corn, which was 1*s.* a quarter in 1861, had disappeared from the list in 1871, though only just before that year; and timber and various other articles which were dutiable in 1861, have likewise vanished. The reductions, except sugar and tea, were not generally important in amount, but the changes on balance have been all one way. In Excise there have been fewer or hardly any reductions, if we except the transfers made between

1881 and 1891 to local authorities, but the amount yielded by Excise has increased more than Customs, and the two of course should be taken together. On the other side, it will be seen that income tax, after beginning at 10*d.* per £ in 1861, and being as low as 4*d.* in 1871, has since been raised to 1*s.* in 1901, and now stands, as all of us know, at 1*s.* 2*d.* in the £. No doubt another change in the way of reduction has taken place in the income tax as already mentioned, viz., the increase of the lower limit of the tax and the increase of the limit up to which abatements are made (see Table VII.); but this does not alter the fact of the increase of the rate of the tax as far as incomes above £700 are concerned. With regard to death duties it would be tedious to make an arithmetical comparison, but two or three changes of obvious effect have been made, viz., the subjection of real property to the same rates and mode of charging as personal property, an increase of the duties generally, and a special increase of the rate of duty in proportion to the increase of the size of properties. The marvellous increase of the death duties is thus in no way surprising.

The net result of the whole change is the substitution of income tax and death duties in our tax system for duties of Customs and Excise, especially for duties on tea and sugar, on which we relied largely in 1861, and still relied to some extent as late as 1871. They also take the place, of course, of the minor Customs duties on corn and timber, etc., which existed without any feeling against them as involving a breach of Free Trade, because in fact they yielded some useful money to the exchequer without inconvenience to business.

4. To show the exact proportion of certain branches of revenue to the total revenue at different times, a separate table (Table XII.) has been added in the appendix. This table speaks for itself. It confirms fully what has already been said as to the change in our tax system which has occurred. Income tax and death duties, which supplied 20 per cent., or one-fifth of the revenue

in 1861, and 16 per cent. only in 1871, supplied in 1901 no less than 31 per cent. of the total. Customs and Excise, on the other hand, which supplied 61 per cent. in 1861, and 63 per cent. in 1871, now supply 45 per cent. only.

Summing up this analysis of revenue, and comparing the results with the corresponding facts as to the growth of expenditure already dealt with, we may conclude, I believe, that the showing in some respects is not unsatisfactory. It is unpleasant to have to spend so much as we do on armaments, and to recognise that this expenditure, or at least a large part of it, is of a permanent character, and is not coming to an end with a definite closing of the South African war. It is nevertheless satisfactory so far that we can meet a high expenditure—double and more than double the figures of forty and even thirty years ago—as easily in reality as the expenditure of those years was met. A Rip Van Winkle of the early sixties, if he were to come back to life now, would not find his imperial burdens any greater. If he were a total abstainer and his income were below the income tax level, he would find his burdens even less than they were. A great change has been made in the interval in the substitution of some taxes for others; but we have only to do with substitution and not with an increase of burdens. Opinions will of course differ as to how far the substitution has been wise, and whether the pressure of income tax and death duties on the community as a whole, is not more severe than the pressure of the sugar and tea duties, which contributed a great deal, and the corn, timber, and other duties which contributed a little, to the revenue of thirty and forty years ago; but this is the only point of dispute raised by the present retrospect. As to the changes themselves and the causes, and our ability to meet the increased expenditure of the present time, with no real increase of burden as compared with a recent date, there is absolutely no dispute.

The Growth of Wealth.

The income tax tables and the supplementary tables generally contain further information as to the growth of the resources of the country upon which the expansion of the revenue depends. Though it is not really necessary to show the growth of the country's ability to meet the largely increased expenditure of recent years—and I shall probably have an opportunity after 1905, if the Society will permit me, of continuing those studies on the income tax returns which were commenced before you in 1878—still I may be allowed to add a few more remarks bearing directly on this question.

What I should like to notice first of all, then, is that the doubling of our wealth and of our ability to bear increased burdens does not depend on any astonishing change in the productiveness of the industry of the country. It depends mainly on two factors: (1), the growth of population, and (2), a very moderate increase in the wealth of the population per head. If the population had doubled, the wealth per head remaining the same, there would be no doubt of the country having twice its former ability to bear taxation. But short of doubling, the population may increase so greatly in a given time that a very moderate addition to the wealth per head may produce the same result. Now the increase of population is obscured for this purpose by dealing with the United Kingdom as a whole, which causes the decrease of population in Ireland to set off in part the increase in Great Britain, although the two peoples are not homogeneous. If we put the two together the increase is from 28.9 millions in 1861 to 41.5 millions in 1901, or 43½ per cent., which would require an increase of nearly 40 per cent. in the wealth per head in the interval to account for the doubling of the resources of the country. But if we take Great Britain only, the progressive part of the country, we find the increase of numbers is from 23.1 to 37 millions, or 60 per cent., which would suffice for the doubling of the resources of the country with an increase of 25 per cent. only in individual wealth per head, by no means so astonishing an increase as that which must be allowed for with a smaller increase of population. Against such an increase the deduction of a portion of the poorer population would be a very small set-off.

What the actual increase per head is since 1861 has been already glanced at. It cannot, in any view, be less than 25 per cent., in face of the figures showing the growth of income tax assessments between 1861 and 1901 from 335½ million £ to 788 million £, or over 130 per cent., as compared with a growth of population, reckoning Great Britain only, of 60 per cent. This would imply an increase of 40 to 50 per cent. per head, and would certainly more than justify the assumption of an increase of 25 per cent. only, which is necessary to the doubling of the resources of the country. Reckoning, moreover, the changes in the income tax returns by which the gross amount is understated as compared with what was the case formerly, that is adding nearly 40 million £ to the above figure of 788 million £, the increase then would be no less than 140 per cent. as compared with an increase of 60 per cent. in population, and would imply an increase of wealth per head of over 50 per cent.

Comparing 1871 with 1901, we have an increase from 465.5 million £ in the income tax assessments to the above figure of 788 million £, or, rather, 828 million £, or at the rate of about 80 per cent. as compared with an increase of 54 per cent. in the population of Great Britain only. This would be equal to an increase of 16 per cent. per head, and, although not quite doubling the whole wealth of the country in thirty years, comes very near to doing so.

If it were in my power to go more into detail with the income tax figures than has been found possible at short notice, these conclusions would be strongly supported. The large growth of "houses" for instance, nearly 200 per cent. (see Table XI.), cannot but attract observation.

The great increase of the consumption of tea and sugar has already been adverted to, but the figures as to consumption of meat and other articles in the supplementary tables are equally instructive, and it is unnecessary to repeat them in detail. The evidence is, moreover, cumulative, the facts as to revenue supporting the other evidence as to the growth of wealth, and being themselves explained by that growth as they could not otherwise be explained. Nor is another fact apparent on the face of the supplementary tables and of the income tax returns, viz., the fact of a decline or stationary condition of agriculture and of some other industries, inconsistent with this conclusion. There is always an up and down in every sort of industry. New industries are continually starting up, and no one can foresee from year to year in what new directions we are to advance and where it is inevitable we should recede. The point is to have an increase of wealth and income on balance, and not set too much store on special changes.

Summary and Conclusion.

This paper has extended, I fear, beyond the modest limits intended by my friends. Let me hasten therefore to summarize what has been said, and add a word or two of comment, if not exhortation.

1. The expenditure of the Imperial Government of the United Kingdom has increased since the completion of Free Trade reform in 1861, and mostly since 1891, from an initial figure of about 70 million £ to the present total of 180 million £ or thereabouts, of which about 150 to 160 million £ may be considered of a permanent character.

2. No part of this increase is due to the increase of the debt charge, which has rather diminished.

3. Further, the increase is only due in small degree

to Civil Service expenditure, which has increased a few millions only, apart from education, while the expenditure of Customs and Excise has hardly increased at all. The increase for education, however, is nearly 12 million £.

4. A large part of the increase is due to the Post Office department, the outlay for which has risen from 3 to 13½ million £, in consequence, it is obvious, of the additional services which the department conducts for the benefit of the public as compared with what it formerly managed, and in consequence of the extensive growth of the older services themselves.

5. The main increase of expenditure is, however, due to Army and Navy, on which we spent in 1900-01 over 121 million £ as compared with little more than 30 million £ in 1861, and about 22 million £ only in 1871. Although 70 million £ of this increase is set down in the budget as for war, the ordinary growth of Army and Navy being set down as no more than about 30 million £, reasons are given for the opinion that the expenditure for armaments is not permanently reducible by so large a figure as the amount set down for war. A total permanent outlay of at least 150 million £ is considered to be highly probable, of which 80 million £ or over will be for Army and Navy.

6. The revenue has also increased greatly since 1861, viz., from about 70 to 130 million £ in 1900-01, and to an estimated figure of 142½ million £ in the current year.

7. It is considered, however, that notwithstanding the increase of burden, the country is as well able to bear this load as it was to bear the smaller sum of 70 million £ levied in 1861 and 1871. It is pointed out that the population of Great Britain has increased 60 per cent. since 1861, and that with a very small increase of wealth per head, so large an increase of the progressive part of the population implies the doubling, and more than doubling, of the resources of the country.

8. A table is also given, compiled from the official returns, as to taxes repealed or reduced, and imposed or increased since 1861, showing that on balance the taxes have not been increased, but have rather been diminished in the interval. The diminutions amount to 71 million £, and the additions to 62.6 million £, making a net reduction of 8.4 million £. Reasons are given for the opinion that the real reduction is even greater, but the fact is placed beyond question that the larger revenue now raised is not due in any way to new taxation as compared with 1861 and even 1871, but is exclusively an automatic growth, due to the increased productiveness of the former scale of taxation.

9. While taxation generally has not increased, great changes have occurred among the taxes themselves. While income tax and death duties have been increased enormously, indirect taxes have been struck off, particularly duties on tea and sugar, besides minor duties on corn, timber, and other articles, all of which, it is pointed out, were in existence at a time when Free Trade had been completely established, so that there is no question of Free Trade involved in the substitution in question.

It is submitted, then, in conclusion, without going into all the arguments *pro* and *con*, that the time has now come for reviewing the question of national expenditure in a business way with reference to the international position and duties of the country, and without any concern as to the ability of the country to meet what is required. The time would also appear to have come for inquiring into the reasons for substituting income tax and death duties for certain indirect taxes. It can hardly be contended that the change has been deliberately made, seeing that the reductions of indirect imposts were made in the buoyant days, when prosperity was advancing by leaps and bounds, and we were drinking ourselves out of the "Alabama" claims, while the increase of income tax and death duties has taken place quite recently as a ready means of getting money, and without any inquiry as to the actual duties that had been last got rid of. No question as to Free Trade, it may be again repeated, is involved, as the nation was never more free trading than it was in the sixties. One or two duties, such as the corn duty, may be technically a breach of Free Trade, but the mischief resulting from such a breach, as it was considered in the days of Cobden, is much less than the mischief of a high income tax which is now the substitute. It is not proposed, however, to argue out the question here, but only to show that it is inevitably raised for discussion.

[NOTE.—I desire specially to express my thanks to Dr. Ginsburg, Secretary, and Mr. Mackenzie, Chief Clerk of the Royal Statistical Society, for the preparation of the annexed tables. I have only been able to revise them partially, but I am sure they are completely trustworthy. I have also to add (1904) that while a little difference would be made in some of the figures by taking the latest financial year, following on the close of the war, the results yielded by the retrospect generally would not vary substantially from those here stated. The Appendix following does not include the supplementary Tables in the original paper, which will be found in the Statistical Society's Journal for 1902. —R. G.]

APPENDIX I.

TABLE I.—*Revenue and Expenditure of the Imperial Government of the United Kingdom.*

Years ending 31st March.	Revenue.	Expenditure.	Population of United Kingdom.	Expenditure per Head of Population.
	Mln. £.	Mln. £.		£ s. d.
1861	70.3[1]	72.8[1]	28.9	2 10 8
'71	69.9[1]	69.5[1]	31.5	2 4 3
'81	81.9	80.9	34.9	2 6 4
'91	89.5	87.7	37.7	2 6 6
1901	130.4	183.6[2]	41.5	4 8 6
Estimate for 1901-02 .	142.5	191.3	41.5	4 12 2

TABLE IA.—*Revenue received by Imperial Government, and paid over to Local Authorities, and Government subventions as acknowledged by Local Authorities.*

[Mln. £'s.]

	Amount Received and Handed Over to Local Authorities.	Subventions as Acknowledged by Local Authorities.
1861	—	—[3]
'71	—	—[3]
'81	—	3.4
'91	7.1	8.6
1901	9.6	14.2

Note.—The amounts in column 1 do not appear in the ordinary accounts of Imperial revenue and expenditure. The amounts in the second column include the amounts in the first column as well as in the grants.

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[1] These figures include Army and Navy extra receipts and contributions by India for military charges, and are not strictly comparable with the later years. Excluding these amounts, the figures for 1871 would read, revenue 68.2 million £, expenditure 67.8 million £.

[2] Including 68.6 million £ for war expenditure.

[3] There were Government grants in 1861 and 1871, as well as in later years; but the summary of the local taxation accounts in the "Statistical Abstract," from which the figures in this column were taken, does not go so far back as 1861, and the exact sums for comparison could only be ascertained with difficulty. They would be less, and not more, than in 1881.

TABLE II.—*Amount of the National Debt, and Charge for Interest.*

[Mln. £'s.]

Years ending 5th April.	Total Debt, excluding Local Loans Stock after 1881.	Annual Charge for Interest and Sinking Fund in Budget.
1861	824.6	26.3
'71	789.2	26.8
'81	770.8	29.6
'91	686.0	25.2
1901	705.7	19.8
'02 (estimated) . .	—	21.6

Note.—The annual charge includes the amount of the whole instalment for annuities as well as interest on the permanent funded debt, and also includes other appropriations for repayment of debt, varying in different years. After 1881 a separate issue was made of local loans stock, and the amount of this stock is not now included as part of the national debt, there being corresponding assets on the other side, and the receipts and payment of interest being outside the budget. To make a proper comparison, the amounts for the earlier years, 1861, 1871, and 1881, should be reduced somewhat. The local loans about 1887, when the change was made, amounted to 36 million £.

TABLE III.—*Army and Navy Expenditure, excluding Amounts Charged to Capital.*

[Mln. £'s.]

Years.	Army.	Navy.	Total.
1861	15.0	13.3	31.3[1]
'71	13.5[2]	9.0	22.5
'81	14.7	10.5	25.8[3]
'91	17.9	15.5	33.5
1901	91.9	29.5	121.4[4]
'02 (estimate) . .	90.0	30.9	120.9[5]

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[1] Including 3 mln. £ for Chinese war.
[2] Including 1.4 mln. £ vote of credit, war in Europe.
[3] Including £500,000 grant for Afghan war, etc.
[4] Including 68.6 mln. £ for war expenditure.
[5] The figure has been changed several times, and this is the nearest I can give.

TABLE IV.—*Civil Service and Post Office Expenditure.*

[Thousand £'s.]

1 Years ending 31st March,	2 Consolidated Fund Charges, exclusive of Debt Charges.	3 Education.	4 Other Civil Service Expenditure	5 Total.	6 Revenue Collection, Excise and Customs.	7 Post Office Telegraphs and Packet Service.
1861 . .	2,296,	1,097,	6,266,	9,659,	2,569,	2,999,[1]
'71 . .	2,113,	1,859,	7,991,	11,963,	2,573,	3,949,
'81 . .	1,670,	4,281,	11,405,	17,356,	2,850,	5,372,
'91 . .	2,068,	6,114,	9,551,	17,733,	2,643,	8,661,
1901 . .	1,569,	12,662,	10,623,	24,854,	2,834,	13,471,

Note.—The figures in column 4 are obtained by subtracting the totals of columns 2 and 3 from column 5.

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[1] Post Office and packet service only.

TABLE V.—*Principal Branches of Revenue.*

[Mln. £'s.]

	1861.	1871.	1881.	1891.	1901.
Total Imperial expenditure . .	72,8 [1]	67,8	80,9	87,7	183,6
Total Imperial revenue:					
Customs	23,3	20,1	19,2	19,5	26,3
Excise	19,4	22,8	25,3	24,8	33,1
Stamps (excluding death duties)	4,9	3,6	4,5	5,9	7,8
Income tax	10,9	6,4	10,7	13,3	26,9
Land tax[2]	3,1	2,7	1,0	1,0	8
House duty			1,7	1,6	1,7
Death duties	3,4	4,8	6,6	7,5	13,0
Post Office and telegraphs .	3,4	5,3	8,3	12,3	17,3
Miscellaneous (including interest on advances for local works and Government Suez Canal shares, etc.)	1,9	2,5	4,6	3,6	3,6
Total	70,4	68,2	81,9	89,5	130,4
Revenue[3] received and paid to local authorities:					
Customs	—	—	—	2	2
Excise	—	—	—	1,1	1,4
,, licences	—	—	—	3,4	3,9
Death duties	—	—	—	2,4	4,1
Total	—	—	—	7,1	9,6

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[1] Including Army and Navy extra receipts, and the contributions by India for military charges, formerly brought to account as revenue, and thus causing a corresponding increase in expenditure.

[2] These figures were not given separately in the "Statistical Abstract" in 1861 and 1871.

[3] These receipts formerly formed part of the Imperial revenue; since 1888-89 they have been paid to the local authorities in relief of local burdens.

TABLE VI.—*Net Receipts from Principal Heads of Customs.*

[Thousand £'s.]

	1861.	1871.	1881.	1891.	1901.
Customs:					
Spirits (foreign and colonial)	2,624,	4,419,	4,444,	4,493,	4,770,
Tobacco and snuff	5,606,	6,614,	8,659,	9,534,	12,839,
Tea	5,420,	3,235,	3,866,	3,411,	6,265,
Sugar and molasses	6,067,	3,219,	—	—	
Coffee	439,	416,	200,	182,	190,
Cocoa	—	32,	53,[1]	105,	242,
Currants, raisins, and dried fruits	219,[1]	463,	491,	324,	359,
Wine	1,145	1,584,	1,376,	1,318,	1,468,
Corn, meal, and flour	869,	—	—	—	—
Timber	237,[1]	—	—	—	—
Other imported articles	395,	127,	88,	80,	99,
Miscellaneous receipts	258,	129,	34,	32,	39,
Total	23,278,	20,239,	19,210,	19·479,	26,271,

TABLE VII.—*Income Tax Assessments, Schedules A—E, Gross Amounts, Years ending 5th April.*

[Mln. £'s.]

Divisions.	1861.	1871.	1881.	1891.	1900.
England	282,2	398,4	493,6	597,3	678,7
Scotland	30,4	41,0	55,5	63,4	75,8
Great Britain	312,6	439,4	549,1	660,7	754,5
Ireland	23,0	26,1	36,1	37,8	33,5
United Kingdom	335,6	465,5	585,2	698,4	788,0

Year	1861.	1871.	1881.	1891.	1900.
General rate to tax	10*d.*	4*d.*	6*d.*	6*d.*	1*s.*
Lowest income without abatement	£150	£200	£400	£400	£700
Lowest income taxed	£100	£100	£150	£150	£160
Abatements:					
On income under	£150	£200	£400	£400	(*a.*) £400 (*b.*) £500 (*c.*) £600 (*d.*) £700
Amount of abatement	Pay 7*d.* rate only	£60	£120	£120	(*a.*) £100 (*b.*) £150 (*c.*) £120 (*d.*) £70

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[1] Gross receipts.

TABLE VIII.—*Net Receipts from Principal Heads of Excise.*

[Thousand £'s.]

	1861.	1871.	1881.	1891.	1901.
Excise:					
Spirits	9,226,	11,464,	14,394,	14,771,	19,207,
Malt	6,209,	6,978,	2,676,	—	—
Beer	—	—	3,482,	9,390,	13,491,
Sugar used in brewing	—	95,	502,	—	—
Chicory	—	17,	1,	2,	1,
Coffee mixture labels	—		—	3,	2,
Railways	—	506,	748,	324,	331,
Licences	1,493,	3,729,	3,568,	230,	250,
Other receipts	2,621,	45,	—	4,	5,
Total	19,548,	22,834,	25,372,	24,724,	33,287,

Net Receipts of Duties Collected for Local Authorities by Imperial Officers.

	1861.	1871.	1881.	1891.	1901.
Additional beer and spirit duties — Customs	—	—	—	206,	219,
Additional beer and spirit duties — Excise	—	—	—	1,095,	1,367,
Excise licences	—	—	—	3,360,	3,886,

TABLE IX.—*Yield of a Penny on the Income Tax at different Periods.*

	Figures from the Budget Speech.	Figures from Inland Revenue Returns.
	£	£
In 1901 a penny produced	2,400,000	2,426,000
,, 1891 a penny produced	2,300,000	2,215,856
,, '81 a penny produced	1,943,000	—
,, '71 a penny produced	1,525,000	—
,, '61 a penny produced	1,100,000	—

TABLE X.—*Rates of Duty on Principal Heads of Customs.*

Articles.	1861.	1871.	1881.	1891.	1900-01.
Spirits, foreign and colonial *per gall.*	10s. 2d. to 10s. 5d.	10s. 2d. to 10s. 5d.	10s. 4d.	10s. 4d. and 6d. for local taxation	11s. 4d.
[1] Tobacco and cigars: Unmanufactured . . *per lb.*	3s.	3s. to 3s. 6d. and 5 per cent. add.	3s. 6d. to 3s. 10d.	3s. 2d. to 3s. 6d.	3s. to 3s. 4d.
Tobacco and cigars: Manufactured and cigars ,,	9s.	4s. 6d. to 5s.	4s. 4d. to 5s. 6d.	4s. to 5s.	3s. 10d. to 5s. 6d.
Tobacco, snuff . . . . . ,,	6s.	3s. 9d.	4s. 1d. to 4s. 10d.	3s. 9d. to 4s. 6d.	3s. 7d. to 4s. 4d.
Tea . . . . ,,	1s. 5d.	6d.	6d.	4d.	6d.
Sugar and molasses, *per cwt.*: Raw	12s. 8d. to 16s.	4s. to 5s. 8d.	—	—	—
Sugar and molasses, *per cwt.*: Refined . . .	18s. 4d.	6s.	—	—	—
Coffee: Kiln dried . . . *per lb.*	—	—	2d.	2d.	2d.
Coffee: Raw . . . . . ,,	4d.	4d.	—	—	—
Coffee: ,, ... *per cwt.*	—	—	14s.	14s.	14s.
Cocoa . . . . *per lb.*	1d.	1d.	1d.	1d.	1d.
,, chocolate and paste . ,,	2d.	2d.	and prep 2d.	ared cocoa 2d.	imported 2d.
,, butter . . . . . . ,,	—	—	—	—	1d.
,, in husk . . . . . *per cwt.*	2s.	2s.	2s.	2s.	2s.
Currants . . . . ,,	7s.	7s.	7s.	2s.	2s.
Raisins, figs, etc. . . . . ,,				7s.	7s.
Wine (not in bottles) . . *per gall.*	1s. to 2s. 11d.	1s. to 2s. 6d. and	1s. to 2s. 6d 3d. a degr	1s. to 2s. 6d. ee over 42	1s. 3d. to 3s. proof
Corn: Wheat . . . . . *per qr.*	1s.	—	—	—	—
Corn: Meal, etc. . . . *per cwt.*	4½d.	—	—	—	—
Timber: Hewn . . . *per load*	1s.	—	—	—	—
Timber: Sawn, etc. . . . ,,	2s.	—	—	—	—
Timber: Teak, for ships . ,,	1s.	—	—	—	—
Beer: Mum and spruce *per 36 gall.*	£1	£1 1s. to £1 4s.	£1 6s. to £1 10s 6d.	£1 6s. to £1 10s. 6d.	£1 12s. to £1 17s. 6d.
Beer: Other sorts . . ,,	£1	8s. to 16s.	6s. 6d.	6s. 6d.	8s.
Hops . . . . *per cwt.*	£1	—	—	—	—
Malt . . . . *per qr*	£1 5s.	£1 4s. To 1st April, 1871, £1 5s.	—	—	—
Cards, playing . . *per doz. packs*	15s.	3s. 9d.	3s. 9d.	3s. 9d.	3s. 9d.
Corks, ready made . . . *per lb.*	3d.	(Free from	1st April,	1861)	
Dice . . . . *per pair*	£1 1s.	—	—	—	—
Hats or bonnets . . . . *per lb.*	£1 3s	(Free from	1st April,	1861)	
Paper: Paper and books . *per cwt.*	15s. to 16s.	(Free fro	m 1st Octo	ber, 1861)	
Paper: Printed, painted or stained paper hangings . . ,,	14s.				
Plate: Gold . . . . . . *per oz.*	17s.	17s.	17s.	—	—
Plate: Silver . . . . . ,,	1s. 6d.	1s. 6d.	1s. 6d.	—	—
Ships: foreign, built of wood. On the registration thereof as British ships, for *every ton* of gross registered tonnage, without any deduction in respect of engine room or otherwise	1s.	—	—	—	—
Varnish, containing any quantity of spirit or alcohol . . . . *per gall.*	12s.	12s.	—	—	—
Vinegar . . . . ,,	3d.	3d.	—	—	—
,, pickles, preserved in vinegar . . . . . ,,	1d.	1d.	—	—	—

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[1] Tobacco. In 1871 and 1881, higher duty charged when containing less than 10 per cent. of moisture.

In 1891, higher duty charged when containing less than 13 per cent. of moisture.

,, 1900-01 ,, ,, 10 ,,

TABLE XI.—*Gross Assessments to Income Tax of Lands, Houses, and Railways (United Kingdom). Years ending 5th April.*

[Million £'s.]

	Lands.	Houses.	Railways (United Kingdom).
1862	60.3	61.9	14.8
'71	65.4	86.3	22.0
'81	69.3	117.[illegible]	29.1
'91	57.7	140.6	36.4
1900	52.8	174.4	39.4

TABLE XII.—*Proportion of certain Branches of Revenue to Total Revenue (Exchequer Receipts). Years ended 31st March.*

Branch of Revenue.	1861.		1871.		1881.		1891.		1901.	
	Mln. £	Per cent. of total.	Mln. £	Per cent. of total.	Mln. £	Per cent. of total.	Mln. £	Per cent. of total.	Mln. £	Per cent. of total.
a. Property and income tax .	10.9	15	6.4	9	10.7	13	13.3	15	26.9	21
b. Death duties . .	3.5	5	4.8	7	6.7	8	7.4	8	13.0	10
c. House duty and land tax . .	3.1	4	2.7	4	2.7	4	2.6	3	2.5	2
Total . .	17.5	24	13.9	20	20.1	25	23.3	26	42.4	33
d. Customs and excise . . .	42.7	61	42.9	63	44.5	54	44.3	49	59.4	45
e. Stamps	5.0[1]	7	3.6[1]	5	4.4[1]	5	6.0[1]	7	7.8	6
f. Post office and telegraph service . . .	3.4	5	5.3	8	8.3	10	12.3	14	17.3	13
Miscellaneous . .	1.8	3	2.5	4	4.6	6	3.6	4	3.5	3
Total revenue . .	70.4	100	68.2	100	81.9	100	89.5	100	130.4	100

[1] Excluding death duties.

TABLE XIII.—*Statement of Taxes Imposed or Increased, and Repealed or Reduced, in the Years* 1861-1901, *showing the Estimated Gain or Loss in a complete Year.*

[In million £'s.]

Years ended 31st March,	Period 1861-71.		Years ended 31st March,	Period 1881-91.	
	Imposed or Increased.	Repealed or Reduced.		Imposed or Increased.	Repealed or Reduced.
1862 . .	0.1	2.7	1882 . .	0.7	2.6
'63 . .	0.3	0.4	'83 . .	2.8	—
'64 . .	—	4.6	'84 . .	—	3.3
'65 . .	0.1	3.4	'85 . .	2.0	—
'66 . .	—	5.3	'86 . .	4.3	—
'67 . .	—	0.6	'87 . .	—	—
'68 . .	1.6	0.3	'88 . .	0.1	2.6
'69 . .	1.5	—	'89 . .	0.9	3.5
1870 . .	1.1	4.8	1890 . .	1.4	3.7
'71 . .	0.1	4.6	'91 . .	—	3.1
	4.8	26.7		12.2	18.8

Years ended 31st March,	Period 1871-81.		Years ended 31st March,	Period 1891-1901.	
	Imposed or Increased.	Repealed or Reduced.		Imposed or Increased.	Repealed or Reduced.
1872 . .	3.1	—	1892 . .	—	—
'73 . .	—	3.9	'93 . .	—	—
'74 . .	—	3.2	'94 . .	2.2	—
'75 . .	—	4.3	'95 . .	7.2	1.6
'76 . .	—	—	'96 . .	—	—
'77 . .	1.8	0.4	'97 . .	—	2.3
'78 . .	—	—	'98 . .	—	—
'79 . .	4.5	0.1	'99 . .	—	1.3
1880 . .	—	—	1900 . .	1.0	—
'81 . .	11.6	8.4	'01 . .	14.2	—
	21.0	20.3		24.6	5.2

Summary.

Period.	Imposed or Increased.	Repealed or Reduced.
1861-71	4.8	26.7
'71-81	21.0	20.3
'81-91	12.2	18.8
'91-1901	24.6	5.2
	62.6	71.0
Deduct taxes imposed or increased	—	62.6
Net reduction	—	8.4

XXVIII.

THE IMPORTANCE OF GENERAL STATISTICAL IDEAS.[1]

I TRUST you will excuse me, on an occasion like the present, for returning to a topic which I have discussed more than once—the utility of common statistics. While we are indebted for much of our statistical knowledge to elaborate special inquiries such as were made by Mr. Jevons on prices and the currency, or have lately been made by Mr. Booth into the condition of the London poor, we are indebted for other knowledge to continuous official and unofficial records, which keep us posted up to date as to certain facts of current life and business, without which public men and men of business, in the daily concerns of life, would be very much at a loss. What seems to me always most desirable to understand is the importance of some of the ideas to be derived from the most common statistics of the latter kind—the regular records of statistical facts which modern societies have instituted, especially the records of the census, which have now existed for a century in most European countries and among peoples of European origin. Political ideas and speculation are necessarily coloured by ideas originating in such records, and political action, internationally and otherwise, would be all the wiser if the records were more carefully observed than they are, and the lessons to be derived widely appreciated and understood.

I propose now to refer briefly to one or two of these ideas which were taken up and discussed on former occasions, and to illustrate the matter farther by a reference to one or two additional topics suggested in the same manner, and more particularly by the results of the last census investigations, which complete in this respect the record of what may be called the statistical century *par excellence*—the century which has just closed.

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[1] Address as President of the Economic Science and Statistics Section of the British Association, held at Glasgow, 1901.

Increase of European Population during last Century.

The first broad fact then of this kind, which I have discussed on former occasions, is the enormous increase of the population of European countries and of peoples of European origin during the century just passed, especially the increase of the English people and of the United States, along with the comparative stationariness of the population of one or two of the countries, particularly France, at the same time. The growth all round is from about 170 millions at the beginning of the century to about 510 millions (excluding South American countries and Mexico); while the growth of the United States alone is from a little over 5 to nearly 80 millions, and of the English population of the British Empire from about 15 to 55 millions. Germany and Russia also show remarkable growth—from 20 to 55 millions in the one case, and from 40 to 135 millions in the other—partly due to annexation; but the growth of France is no more than from 25 to 40 millions. Without discussing it, we may understand that the economic growth is equally if not more remarkable. The effect necessarily is to assure the preponderance of European peoples among the races of the world—to put aside completely, for instance, the nightmares of yellow or black perils arising from the supposed overwhelming mass of yellow or black races, these races by comparison being stationary or nearly so. The increase of population being continuous, unless some startling change occurs before long, each year only makes European preponderance more secure. Equally it follows that the relative position of the English Empire, the United

States, Russia, and Germany has become such as to make them exclusively the great world powers, although France, for economic reasons, notwithstanding the stationariness of its population, may still be classed amongst them. When one thinks what international politics were only a hundred years ago—how supreme France then appeared; how important were Austria, Italy, Spain, and even countries like Holland, Denmark, and Sweden—we may surely recognize that with a comparatively new United States on the stage, and with powers like Russia and Germany come to the front, the world is all changed politically as well as economically, and that new passions and new rivalries have to be considered.

The figures also suggest that for some time at least the movements going on must accentuate the change that has occurred. According to the latest figures, there is no sign that either in France or any other European country which has been comparatively stationary, has any growth of population commenced which will reverse the change, while a large increase of population goes on in the leading countries named. This increase, it is alleged, is going on at a diminishing rate—a point to be discussed afterwards—but in the next generation or two there is practically no doubt that the United States will be a larger international factor than it is, both absolutely and relatively, and that Russia, Germany, and the English people of the British Empire will also grow, though not in such a way, apparently, as to prevent the greater relative growth of the United States, and notwithstanding perhaps some relative changes of a minor character amongst themselves.

The foreign nations then with which the British Empire is likely to be concerned in the near future are Russia, Germany, and the United States; and other powers, even France, must more and more occupy a second place, although France, for the moment, partly in consequence of its relations with Russia, occupies a special place.

Special Position of British Empire.

Another idea which follows from a consideration of the same facts, is the necessity laid upon the British Empire to consolidate and organize itself in view of the large additions of subject races made to it in the last century, and especially in the last twenty years of the century. In a paper which I read before the Royal Colonial Institute two years ago, an attempt was made to show that the burden imposed on the white races of the Empire by these recent acquisitions was not excessive as far as the prospect of internal tumults was concerned. Relatively to some other powers, especially France, we had also been gaining internationally in strength and resources. But whether we had gained internationally on the whole, looking at the growth of powers like the United States, Russia, and Germany, and their greater activity in world-politics, was a different question. The problem thus stated remains. It would be foreign to the scope of an address like this, which must avoid actual politics, to examine how far light has been thrown on it by the South African war. No one can question at least that the organization of the Empire must be governed by considerations which the international statistics suggest, and that no step can be taken safely and properly unless our public men fully appreciate the ideas of international strength and resources as well as other considerations which are germane to the subject.

Europe and Foreign Food Supplies.

Another idea to which attention may be drawn, appears to be the increasing dependence of European nations upon supplies of food and raw material obtained from abroad. We are familiar with a conception of this kind as regards the United Kingdom. For years past we have drawn increasing supplies from abroad, not merely in proportion to the growth of population, but in larger proportion. The position here obviously is that, with the industries of agriculture and the extraction of raw material (except as regards the one article, coal) practically incapable of expansion, and with a population which not only increases in numbers, but which becomes year by year increasingly richer per head, the consuming power of the population increases with enormous rapidity, and must be satisfied, if at all, by foreign imports of food and raw materials; there is no other means of satisfaction. But what is true of the United Kingdom is true in a greater or less degree of certain European countries—France, the Low Countries, the Scandinavian countries, Austria-Hungary, Italy, and Germany. Especially is it true in a remarkable degree of Germany, which is becoming increasingly industrial and manufacturing, and where the room for expansion in agriculture is now very limited. Those interested in the subject may be referred to an excellent paper by Mr. Crawford, read at the Royal Statistical Society of London about two years ago. What I am now desirous to point out is the governing nature of the idea, which necessarily follows from the conception of a European population living on a limited area, with the agricultural and extractive possibilities long since nearly exhausted, and the population all the time increasing in numbers and wealth. Such a population must import more and more year by year, and must be increasingly dependent on foreign supplies.

I shall not attempt to do over again what is done in Mr. Crawford's paper, but a few figures may serve to illustrate what is meant. In the "Statistical Abstract" for the principal and other foreign countries, I find tables for certain European countries classifying the imports for a series of years into articles of food, raw and semi-manufactured articles, etc. From these I extract the following particulars for all the countries which have tables in this form:

Imports of Articles of Food and Raw Materials and Semi-Manufactured Articles into the undermentioned Countries in 1888 *and* 1898 *compared.*

ARTICLES OF FOOD, ETC.

		1888.	1898.	Increase.	
				Amount.	Per Cent.
Russia	1,000 roubles	78,975	105,391	27,416	35
German Empire	mln. marks	907	1,819	912	100
France . . .	1,000 francs	1,503,000	1,505,000	Nil	Nil
Switzerland . .	,,	238,000	332,000	94,000	40
Italy	1,000 lire	274,480	391,600	117,120	42
Austria-Hungary	1,000 gulden	(1891) 108,441	191,919	92,478	85

RAW AND SEMI-MANUFACTURED MATERIALS.

Russia	1,000 roubles	241,497	313,629	71,132	29
German Empire	mln. marks	1,507	2,247	740	49
France . . .	1,000 francs	2,014	2,348	334	16
Switzerland . .	,,	308,110	390,111	82,001	27
Italy	1,000 lire	398,330	509,418	111,088	28
Austria-Hungary	1,000 gulden	231,000	293,000	62,000	27

The drawback to this table is that it is one of values. Consequently the increase of values in the later years may in part be one of values only without corresponding increase of quantities. But the general course of prices in the period in question was not such as to cause a great change of values apart from a change in quantities. The inference seems undeniable then, that the continental countries named, especially Germany, have largely increased their imports of food and raw materials of recent years—that is, have become increasingly dependent on foreign and over-sea supplies. The position of Germany, with its enormous increase of food imports—from 907 to 1,819 million marks, or from 45 to over 90 million sterling, and its corresponding increase of raw material imports—from 1,507 to 2,247 million marks, or from 75 to 112 million sterling—is especially remarkable.

An examination in detail of the quantities imported of particular articles would fully confirm the impression given by the summary figures. But it may be enough to refer to the "Statistical Abstract" from which I have been quoting, as well as to Mr. Crawford's paper. The figures are not out of the way in any respect, and it is the idea we have now to get hold of.

The inference is that the difference between the United Kingdom and continental countries, especially Germany, as regards dependence on foreign supplies of food and raw materials, is only one of degree, and that as regards Germany at least the conditions are already remarkably like those of the United Kingdom, while the more rapidly Germany increases its manufacturing and industrial population, the more like it will become to this country. In other words, in the future there will be two great countries, and not one only, dependent largely for their food and raw materials on supplies from abroad. What their position is to be economically and otherwise relatively to the United States, which is at once the main source of supply, and a competitor with European countries in manufactures, is obviously a matter of no little interest. As a believer in free trade, I am sure that nothing but good will come to all the countries concerned if trade is interfered with as little as possible by tariffs and government regulations. I believe, moreover, that the practice of free trade, whatever their theories may be, will unavoidably be accepted by all three countries before long. Obviously, however, as the new tariff in Germany indicates, there is to be a great struggle in that country before the situation is accepted, and if some people in this country had their way, notwithstanding our long experience of free trade and its blessings, we should even have a struggle here.

There is another point of view from which the facts should be studied. We are accustomed, and rightly so, I think, to consider naval preponderance indispensable to the safety of the Empire, and especially indispensable to the safety of the country from blockade, and from the interruption of its commerce, which would be our ruin. But our position in this respect is apparently not quite exceptional. Less or more our continental neighbours, and especially Germany, are in the same boat. In the event of war, if they could not make up the loss by traffic over their land frontiers, they would be just as liable to suffer from blockade and interrupted commerce as we are. It is conceivable, moreover, that in certain wars some of the countries might not be able to make up by traffic over their land frontiers for blockade or interruption of commerce by sea. We may apprehend, for instance, that Germany, if it were victorious by sea in a war with France, would insist upon Belgium and Holland on one side, and Italy and Spain on the other side, not supplying by land to France what had been cut off by sea. One or more of these countries might be allies with Germany from the first. Contrariwise France and Russia, if at war with Germany and the Triple Alliance, might practically seal up Germany if they were successful at sea, insisting that the Scandinavian countries and Holland should not make up to Germany by land what had been cut off by sea. Germany in this view, apart from any possibility of rupture with this country, has a case for a powerful fleet. It is not quite so much liable to a blockade as we are, but there is a liability of the same kind. The question of naval preponderance among rival powers may thus become rather a serious one. If preponderance is to be nearly as essential to Germany as it is to this country, who is to preponderate? What our practical action ought to be in the premises is a question that might easily lead us too far on an occasion like this, but the facts should be ever present to the minds of our public men. We may be quite certain that they are quite well known and understood in the councils of the Russian, German, French, and other continental governments.

New Population and New Markets.

Another idea suggested by the facts appears to be an answer to the question as to how new markets are to be found for the products of an increasing population—a question which vexes the mind of many who see in nothing but foreign trade an outlet for new energies. The point was mentioned in my address at Manchester a year ago, but it deserves perhaps a more elaborate treatment than it was possible then to give it. What we see then is that not only in this country, but in Germany and other continental countries, millions of new people are, in fact, provided for in every ten years, although the resources of the country in food and raw materials are generally used to the full extent, and not capable of farther expansion, so that increasing supplies of food and raw material have to be imported from abroad. How is the thing done? Obviously the main provision for the wants of the new people is effected by themselves. They exchange services with each other, and so procure the major part of the comforts and luxuries of life which they require. The butcher, the baker, the tailor, the dressmaker, the milliner, the shoemaker, the builder, the teacher, the doctor, the lawyer, and so on, are all working for each other the most part of their lives, and the proportion of exchanges with foreign countries necessary to procure some things required in the general economy may be very small. These exchanges may also very largely take the form of a remittance of goods by foreign countries in payment of interest on debts which they owe, so that the communities in question obtain much of what they want from abroad by levying a kind of rent or annuity which the foreigner has to pay. If more is required, it may be obtained by special means, as for instance by the working of coal for export, which gives employment in this country to about 200,000 miners, by the employment of shipping in the carrying trade, by the manufacture of special lines of goods, and so on. But the main exchanges of any country are, and must be as a rule, at home, and the foreign trade, however important, will always remain within limits, and bearing some proportion to the total exchanges of the country. Hence, when additions to the population, and how they are to live are considered, the answer is that the additions will fill up proportionately the framework of the various industries already in existence, or the ever-changing new industries for home consumption which are always starting into being. These are the primary outlets for new population even in old countries like the United Kingdom and Germany. Of course active traders and manufacturers, each in his own way, are not to take things for granted. They must strive to spread their activities over foreign as well as over home markets. But looking at the matter from the outside, and scientifically, it is the home and not the foreign market which is always the most important.

The same may be said of a country in a somewhat different economic condition from England and Germany, viz., the United States. I can only refer to it, however, in passing, as the facts here are not so clearly on the surface. Contrary to England and Germany, which have no food resources and resources of raw material capable of indefinite expansion, the United States is still to a large extent a virgin country. Its increasing population is therefore provided for in a different way for the most part from the increase in England and Germany. But even in the United States it has been noticeable at each of the last census returns that the increasing population finds an outlet more and more largely, not in agriculture and the extraction of raw materials, but in the miscellaneous pursuits of industry and manufacture. The town population increases disproportionately. In the last census especially it was found that the overflow of population over the far Western States seemed to have been checked, the increase of population being mainly in the older States and the towns and cities of the older States. The phenomena in England and Germany and in other continental countries are accordingly not singular. The older countries, and the older parts even of a new country like the United States, are becoming more and more the centres where populations live and grow, because they are the most convenient places for the general exchange of services with each other among the component parts of a large population, which constitutes production and consumption. A small expenditure of effort in proportion enables such communities to obtain from a distance the food and raw materials which they require. Migration is no longer the necessity that it was.

Decline in Rate of Growth of Population.

I come now to another idea appearing on the surface of the census returns when they are compared for a long time past, and the connected returns of births, marriages, and deaths, which have now been kept in most civilized communities for generations. Great as the increase of population is with which we have been dealing, there are indications that the rate of growth in the most recent census periods is less in many quarters than it formerly was, while there has been a corresponding decline in the birth-rates; and to some extent, though not to the same extent, in the rate of the excess of births over deaths, which is the critical rate of course in a question of the increase of population. These facts have suggested to some a question as to how far the increase of population which has been so marked in the past century is likely to continue, and speculations have been indulged in as to whether there is a real decline in the fecundity of population among the peoples in question resembling the decline in France, both in its nature and consequences. I do not propose to discuss all these various questions, but rather to indicate the way in which the problem is suggested by the statistics, and the importance of the questions thus raised for discussion, as a proof of the value of the continuous statistical records themselves.

The United States naturally claims first attention in a matter like this, both on account of the magnitude of the increase of population there, and the evidence that recent growth has not been quite the same as it was earlier in the century. Continuing a table which was printed in my address as President of the Statistical Society, in 1882, above referred to, we find that the growth of population in the United States since 1800 has been as follows in each census period:

Population in the United States, and Increase in each Census Period of the Nineteenth Century.

	Population.	Increase since previous Census.	
		Amount.	Per Cent.
	Mlns.	Mlns.	
1800	5.3	—	—
'10	7.2	1.9	36
'20	9.6	2.4	33
'30	12.9	3.3	34
'40	17.1	4.2	33
'50	23.2	6.1	36
'60	31.4	8.2	36
'70	38.5	7.1	23
'80	50.1	11.6	30
'90	62.6	12.5	25
1900	75.7[1]	13.1	21

Thus it is quite plain that something has happened in the United States to diminish the rate of increase of population after 1860. Up to that time the growth in each census period from 1800 downwards had ranged between 33 and 36 per cent. Since then the highest rates have been 30 per cent. between 1870 and 1880, and 25 per cent. between 1880 and 1890. There is a certainty moreover that, owing to errors in the census of 1870, which were corrected in 1880, and which have been officially acknowledged by the United States census authorities, the increase between 1870 and 1880 was not quite so high as stated. There is accordingly a somewhat steep decline from a growth in each ten years prior to 1860, ranging between 33 and 36 per cent., to a growth first of about 25 per cent., and finally of 21 per cent. only. The Civil War of the early sixties naturally occurs to one as the explanation of the break immediately after 1860, but the effects could hardly have continued to the present time, and a more general explanation is suggested.

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[1] This does not include population of Indian reservations, etc., now included in the official census for the first time.

Other special explanations have occurred to me as partly accounting for the change. One is that, prior to 1860, the United States at different times increased its territory and population partly by purchase and partly by annexation. But I cannot make out that either the purchase of Louisiana early in the century, or the subsequent annexations following the Mexican War, would make a material difference. There is a considerable increase certainly after the Mexican War, but it would be difficult indeed to estimate how much of the population of Texas and New Mexico which was then added to the Union had previously swarmed over from the Union, and had thus been from the first economically, if not politically, part of the United States. Another obvious suggestion is that possibly immigration into the United States has fallen off as compared with what it formerly was. But this explanation also fails, as far as the official figures carry us. The proportion of immigration to the total increase of population in each census period since 1820, previous to which I have not been able to obtain figures, has been as follows:

Proportion of Immigration to Total Increase of Population in the undermentioned Periods in the United States.

	Per Cent.		Per Cent.
1820-30 . . .	4.7	1860-70 . . .	35.0
'30-40 . . .	14.2	'70-80 . . .	24.2
'40-50 . . .	27.9	'80-90 . . .	42.1
'50-60 . . .	31.5	'90-1900 . . .	29.4

Immigration, according to these figures, has thus in late years played as important a part as it formerly did in the increase of population in the United States. Possibly the official figures of immigration of late years are a little exaggerated, as the United States Government does not show a balance between immigration and emigration; but whatever corrections may be made on this account, the recent figures of immigration are too large to permit the supposition that the failure of immigrants accounts in the main for the diminished rate of increase of the population generally. The ten years' percentage of increase without immigrants, I may say, varied before 1860 between 24 and 32 per cent., and has since fallen to 14 and 15 per cent. Even if the latter figures should be increased a little to allow for the over-estimate of immigration, the change would be enormous.

Passing from the United States, we meet with similar phenomena in Australasia. Indeed, what has happened in Australasia of late has been attracting a good deal of attention. The following short table, which is extracted from the statistics of Mr. Coghlan, the able statistician of the Government of New South Wales, gives an idea of what has occurred:

Population of Australasia at different Dates, with the Annual Increase per Cent. in each Period.

	Population.	Annual Increase per Cent. since previous Date.
	Thousands.	
1788	1.0	—
1801	6.5	15.13
'11	11.5	11.94
'21	35.6	5.88
'31	79.3	8.34
'41	211.1	10.28
'51	430.6	7.36
'61	1,253.0	11.30
'71	1,924.8	4.39
'81	2,742.5	3.60
'91	3,809.9	3.34
'99	4,483.0	2.1

Supplementary Table of Rate per Cent. of Increase since 1890.

	Per Cent.		Per Cent.
1891	3.34	1896	1.84
'92	2.10	'97	1.86
'93	1.96	'98	1.40
'94	1.95	'99	1.44
'95	1.88		

The decline in the rate of increase is so great and palpable as to need no comment.

Here the perturbations due to immigration have obviously been greater than in the case of the United States. The country was in fact settled mainly between 1850 and 1870, without previously having had a population to speak of. But deducting immigration, the increase would appear to have been as follows in each decade:

Rate of Increase per Cent. of Population in Australasia, Deducting Immigration, in the undermentioned Periods.

	Per Cent.		Per Cent.
1851-60	48.5	1880-90	24.5
'60-70	30.0	'90-99	16.0
'70-80	25.0		

Of course, so long as immigration continues, the effect is to swell indirectly the natural increase of population, so that the large increases here shown between 1851 and 1870, and even down to 1890, may be accounted for in part as the indirect result of the large immigration that was going on. But whatever the cause, the fact is unmistakable that the rate of increase, apart from the direct immigration, has declined just as it has done in the United States.

There has been a similar though not nearly so marked a decrease in England, at any rate if we carry the comparison back to the period before 1850. The population at each census period since 1800 in England, with the percentage increase between each census period, has been as follows:

Population of England at the Date of each Census since 1800, *with Percentage of Increase between each Census.*

	Population.	Increase per Cent. since previous Census.
	Mlns.	
1800	8.9	—
'10	10.2	14.0
'20	12.0	18.1
'30	13.9	15.8
'40	15.9	14.5
'50	17.9	12.9
'60	20.1	11.9
'70	22.7	13.2
'80	26.0	14.4
'90	29.0	11.6
1900	32.3	12.2

Thus the increase between recent census periods has been sensibly less than it was before 1850; and the slight recovery between 1860 and 1880 has not been maintained. We are thus in presence of much the same kind of change as has been shown in the United States and in Australasia.

It should be noted, however, in order that we may not strain any fact, that when the United Kingdom is viewed as a whole, Scotland and Ireland, as well as the senior partner being taken into account, it cannot be said that there is any falling off in the rate of growth of the population since 1850. For several decades after that, in fact, the rate of growth of the United Kingdom as a whole was diminished enormously by the emigration from Ireland, and the growth since 1860 has been at a greater rate than in the thirty years before. There may be new causes at work which will again diminish the rate of growth, but in a broad view they do not make themselves visible owing to the disturbance caused by the Irish emigration. Still the facts as to the United Kingdom as a whole ought not to prevent us from considering the facts respecting England only along with the similar facts respecting the United States and Australasia.

These diminutions in the rate of growth of large populations, as I have indicated, are corroborated by a study of the birth-rates, and of the rate of the excess of births over deaths.

The United States unfortunately is without birth or death-rates, owing to the want of a general system of registration over the whole country. This is a most serious defect in the statistical arrangements of that great country, which it may be hoped will be remedied in time. In the absence of the necessary records, I have made some calculations so as to obtain a figure which may be provisionally substituted for a proper rate of the excess of births over deaths, which I submit for what it may be worth as an approximation and an approximation only. In these calculations one-tenth of the increase of population between two census periods, apart from immigration, is compared with the mean of the population at the two census dates themselves, with the following results:

Approximate Rate of Excess of Births over Deaths in the United States, calculated from a Comparison of One-Tenth the Increase of Population between the Census Periods, Deducting Immigrants, with the Mean of the Numbers of the Population at the Two Census Dates.

Year.	1 Population.	2 Mean of Population between Two Censuses	3 One-Tenth of Increase since previous Census, less Immigrants.	4 Calculated Excess of Births over Deaths per 1,000, proportion of Col. 3 to Col. 2.
	Mlns.	Mlns.	Thousands.	
1800 . . .	5·3	—	—	—
'10 . . .	7.2	6.2	—	—
'20 . . .	9.6	8.4	—	—
'30 . . .	12.9	11.2	308	28
40 . . .	17·1	15·0	360	24
'50 . . .	23·2	20.1	441	22
'60 . . .	31·4	27·3	565	21
'70 . . .	38·5	35·0	462	13
'80 . . .	50.2	44·4	878	20[1]
'90 . . .	62.6	56·4	722	13
1900 . . .	75·7	69.2	923	13

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[1] See remarks on pp. 348-349 on errors in Census of 1870.

Thus, while the excess rate was as high as 21 to 28 per 1,000 before 1860, it has since fallen to one of 13 only, or about one-half. Whatever validity may attach to the method of calculation, the real facts would no doubt show a change in the direction of the table—a decline in the rate of the excess of births over deaths from period to period. The decline in the growth of population is thus not merely the direct effect of a change in immigration, but is connected with the birth and death-rates themselves, although these rates are of course indirectly affected by the amount and proportion of immigration. It would be most important to know what the decline in the birth-rate is by itself, and how far its effects on the growth of population have been mitigated or intensified by changes in the death-rate; but United States records generally give no help on this head.

Dealing with Australasia in the same way, we have the advantage of a direct comparison of both birth and death-rates and the rate of the excess of births over deaths. This is done in the following table:

Birth-Rate and Death-Rate and Rate of Excess of Births over Deaths in Australasia for undermentioned Years.

[From Mr. Coghlan's statistics.]

	Birth-Rate.	Death-Rate.	Excess of Births over Deaths.
1861-65 . .	41.92	16.75	25.17
'66-70 . .	39.84	15.62	24.22
'71-75 . .	37.34	15.26	22.08
'76-80 . .	36.38	15.04	21.34
'81-85 . .	35.21	14.79	20.42
'86-90 . .	34.43	13.95	20.48
'91-95 . .	31.52	12.74	18.78
'96-99 . .	27.35	12.39	14.96

Thus from a high birth-rate forty years ago, Australasia has certainly gone down to very ordinary birth-rates, lower than in the United Kingdom and in continental countries, and Australasia certainly has had heavy declines in the rate of excess of births over deaths, viz., from 25.17 in 1861-65, to 15 in 1896-99, which is to be compared with the decline in the United States, as above stated approximately, from 28 in 1820-30, and 21 as late as 1860, to 13 in the last twenty years.

A similar table for England only gives the following results:

Birth-Rate and Death-Rate and Rate of Excess of Births over Deaths in England for undermentioned Years.

	Birth-Rate per 1,000.	Death-Rate per 1,000.	Excess of Birth-Rate over Death-Rate.
1851 . . .	34.2	22.0	12.2
'61 . . .	34.6	21.6	13.0
'71 . . .	35.0	22.6	12.4
'81 . . .	33.9	18.9	15.0
'91 . . .	31.4	20.2	11.2
'99 . . .	29.3	18.3	11.0

Note.—Highest birth-rate in 1876, 36.3.

Here the birth-rates, to begin with, are not so high as in Australasia, and, presumably, in the United States, and the excess of births over deaths, though it has declined a good deal since 1871-81, when it was highest, has been by comparison fairly well maintained, being still 11 per 1,000, as compared with 12.2 in 1851.

We have thus on one side a manifest decline in the rate of growth of population in three large groups of population, coupled with a large decline of birth-rates in England and Australasia where the facts are known, and a smaller decline in the rate of the excess of births over deaths, this decline in England as yet being comparatively small. Such facts cannot but excite inquiry, and it is an excellent result of the use of continuous statistical records that the questions involved can be so definitely raised.

As I have stated, it would be foreign to the object of this paper to discuss fully the various questions thus brought up for discussion, but one or two observations may be made, having regard to some inferences which are somewhat hastily drawn.

1. The rate of growth of population of the communities may still be very considerable, even if it is no higher than it has been in the last few years. A growth of 16, 15, or even 12 per cent. in ten years, owing to the excess of births over deaths, is a very considerable growth, though it is much less than the larger figures which existed in some parts forty or fifty years ago. What has happened in the United Kingdom is well worth observing in this connection. Since 1840 the population of the United Kingdom as a whole has increased nearly 60 per cent., although the increase in most of the decades hardly ever exceeded 8 per cent., and in 1840-50 was no more than 2½ per cent. The increase, it must be remembered, goes on at a compound ratio, and in a few decades an enormous change is apparent. The increase from about 170 to 510 millions in the course of the last century among European people generally, though it includes the enormous growth of the United States in those decades, when the rate of growth was at the highest, also includes the slower growth of other periods, and the slower growths of other countries. An addition of even 10 per cent. only as the average every ten years would far more than double the 500 millions in a century, and an increase to at least 1,500 millions during the century now beginning, unless some great change should occur, would accordingly appear not improbable.

2. Some of the rates of growth of population from which there has been a falling off of late years were obviously quite abnormal. I refer especially to the growth in Australasia between 1850 and 1880. and the

growth in the United States prior to 1860. They were largely due to the indirect effect of immigration which has been already referred to.

The population to which immigrants are largely added in a few years, owing to the composition of the population, has its birth-rates momentarily increased and its death-rates diminished, the birth-rates because there are more people relatively at the child-producing ages, and the death-rates because the whole population is younger, than in older countries. It appears quite unnecessary to elaborate this point. The rates of the excess of births over deaths in a country which is receiving a large immigration must be quite abnormal compared with a country in a more normal condition, while a country from which there is a large emigration, such as Ireland, must tend to show a lower excess than is consistent with a normal condition. This explanation, it may be said, does not apply to England, since it is a country which has not been receiving a large immigration or sending out, except occasionally, a large emigration. England, however, must have been affected both ways by movements of this character. It received undoubtedly a large Irish immigration in the early part of last century, and in more recent periods the emigration in some decades, particularly between 1880 and 1890, appears to have been large enough to have a sensible effect on both the birth-rate and the rate of the excess of births over deaths. This effect would be continued down into the following decade, and the consideration is therefore one to be taken note of as accounting in part for the recent decline in birth-rates in England.

In addition, however, it is not improbable that there was an abnormal increase of population in the early part of last century, due to the sudden multiplication of resources for the benefit of a poor population which had previously tended to grow at a very rapid rate, and would have grown at that rate but for the checks of war, pestilence, and famine, on which Malthus enlarges. The sudden withdrawal of the checks in this view would thus be the immediate cause of the singularly rapid growth of population in the early part of last century. It is quite in accordance with this fact that a generation or two of prosperity, raising the scale of living, would diminish the rate of growth as compared with this abnormal development, without affecting in any degree the permanent reproductive energy of the people.

3. It is also obvious that one explanation of the decline in birth-rate, and of the rate of the excess of births over deaths, may in part be the greater vitality of the populations concerned, so that the composition of the population is altered by an increase of the relative numbers of people not in the prime of life, thus altering the proportion of the people at the child-producing ages to the total. This would be too complex a subject for me to treat in the course of a discursive address. Nor would it explain the whole facts, which include, for instance, an almost stationary annual number of births in the United Kingdom for more than ten years past, notwithstanding the largely increased population. But the case may be one where a great many partial explanations contribute to elucidate the phenomena, so that this particular explanation cannot be overlooked.

4. There remains, however, the question which many people have rushed in to discuss, viz., whether the reproductive power of the populations in question is quite as great as it was fifty or sixty years ago. We have already heard in some quarters, not merely that the reproductive energy has diminished, but suggestions that the populations in question are following the example of the French, where the rate of increase of the population has almost come to an end. Apart, however, from the suggestions above made as to the abnormality of the increase fifty or sixty years ago, so that some decline now is rather to be expected than not, I would point out that the subject is about as full of

pitfalls as any statistical problem can be, for the simple reason that it can only be approached indirectly, as there have been no statistical records over a long series of years showing the proportion of births to married women at the child-producing ages, distinguishing the ages, and showing at the same time the proportion of the married women to the total at those ages. Unless there are some such statistics, direct comparisons are impossible, and a good many of the indirect methods of approaching the subject which I have studied a little appear, to say the least, to leave much to be desired. We find for instance that a comparison has been made in Australasia between the number of marriages in a given year or years and the number of births in the five or six years following, which show, it is said, a remarkable decline in the proportion of births to marriages in recent years as compared with twenty or thirty years ago. It is forgotten, however, that at the earlier dates in Australasia, when a large immigration was taking place, a good many of the children born were the children of parents who had been married before they entered the country, while there are hardly any children of such parents at a time when immigration has almost ceased. The answer to such questions is in truth not to be rushed, and the question with statisticians should rather be how the statistics are to be improved in future, so that although the past cannot be fully explained, the regular statistics themselves will in future give a ready answer.

5. One more remark may perhaps be allowed to me on account of the delicacy and interest of the subject. To a certain extent the causes of a decline in reproductive energy may be part and parcel of the improved condition of the population, which leads in turn to an increase of the age at marriage, and an increase of celibacy generally through the indisposition of individual members of the community to run any risk of sinking in the scale of living which they may run by premature marriage. These causes, however, may

operate to a great extent upon the birth-rate itself without diminishing the growth of population, because the children though born in smaller proportion are better cared for, and the rate of excess of births over deaths consequently remains considerable although the birth-rate itself is low. The serious fact would be a decline of the rate of the excess of births over deaths through the death-rate remaining comparatively high while the birth-rate falls. It is in this conjunction that the gravity of the stationariness of population in France appears to lie. While the birth-rate in France is undoubtedly a low one, 21.9 per 1,000 in 1899, according to the latest figures before me, still this would have been quite sufficient to ensure a considerable excess rate of births over deaths, and a considerable increase of population every ten years if the death-rate had been as low as in the United Kingdom, viz., 18.3 per 1,000. A difference of 3.6 per 1,000 upon a population of about 40 millions comes to about 150,000 per annum or 1,500,000 and rather more every ten years. In France, however, the death-rate was 21.1 per 1,000 instead of 18.3 as in the United Kingdom, and it is this comparatively high death-rate which really makes the population stationary. The speculations indulged in in some quarters, therefore, though they may be justified in future, are hardly yet justified by the general statistical facts. The subject is one of profound interest, and must be carefully studied, but the conclusions I have referred to must be regarded as premature until the study has been made.

Conclusion.

Such are a few illustrations of the importance of the ideas which are suggested by the most common statistics—those of the regular records which civilized societies have instituted. It is indeed self-evident how important it is to know such facts as the growing weight of countries of European civilization in comparison with others; the relative growth of the British Empire, Russia, Germany, and United States, in comparison with other nations of Europe or of European origin; the dependence of other European countries, as well as the United Kingdom, upon imports of food and raw materials; the ability of old countries and of old centres in new countries to maintain large and increasing populations; and the evidence which is now accumulating of changes in the rate of growth of European nations, with suggestions as to the causes of the changes.

It would be easy indeed to write whole chapters on some of these topics, instead of making a remark or two only to bring out their value a little. It would also be very easy to add to the list.

There was a strong temptation to include in it a reference to the relative growth of England, Scotland, and Ireland, which has now become the text of so much discussion, regarding the practical question of diminishing the relative representation of Ireland in Parliament, and increasing that of England and Scotland. It is expedient, however, in an address like this to avoid anything which verges on party politics, and I shall only notice that while the topic has lately become of keen interest to politicians, it is not new to statisticians, who were able long ago to foresee what is now so much remarked on. This very topic was discussed at length in one of the addresses of 1882, to which reference has been made; and even before that, in 1876, it received attention.[1] Another topic which might have been added is that of the economic growth of the different countries, which was discussed in the address in 1883, and such topics as the increase of population in a country like India, under the peace imposed by its European conquerors, by which the stationariness of the country in numbers and wealth, under purely native conditions, has been changed, and something like European progress has been begun.

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[1] See *supra*, vol. i., p. 277; and *supra*, vol. ii., p. 1.

Enough has been said, however, it may be hoped, to justify this mode of looking at statistics and the ideas suggested by them.

May I once more then express the hope, as I have done on former occasions, that, as time goes on, more and more attention will be given to these common statistics and the ideas derived from them. The domination of the ideas suggested by these common figures of population statistics, in international politics and in social and economic relations is obvious; and although the decline in the rate of growth of population in recent years, the last of the topics now touched on, suggests a great many points which the statistics themselves are as yet unfit to solve—what *can* be done with a great country like the United States, absolutely devoid of bare records of births, marriages, and deaths?—still the facts of the decline as far as recorded throw a great deal of light on the social and economic history of the past century, prepare the way for discussing the further topics which require a more elaborate treatment, and enforce the necessity for more and better records. We may emphasise the appeal, then, for the better statistical and economic education of our public men, and for the more careful study by all concerned of such familiar publications as the "Statistical Abstracts," the "Statesman's Yearbook," and the like. The material transformations which are going on throughout the world can be substantially followed without any difficulty in such publications by those who have eyes to see; and to follow such transformations, so as to be ready for the practical questions constantly raised, is at least one of the main uses of statistical knowledge.

XXIX.

THE WEALTH OF THE EMPIRE, AND HOW IT SHOULD BE USED.[1]

IN view of the present meeting of the British Association the suggestion was made to me by your President that a discussion might profitably take place on the wealth of the British Empire, and the uses to which it can be put. We are apt to think in such matters of the mother country only, or even of the separate units of the mother country itself, for the simple reason that the statistics are not uniform. But as the idea of imperial unity takes hold there must come the habit of realising the empire as a whole, and discussing certain problems from an imperial, and not merely a national or local point of view. Among these the question of the use of our imperial wealth ought surely to find a place.

This is not a statistical paper, but it is necessary to start with some idea of what the wealth of the empire really is. We are more or less familiar with ideas of the wealth of the United Kingdom, based mainly on such data as the income tax and death duty returns, whether the expression of that wealth takes the form of an aggregation of individual incomes, or the aggregate of the capitalised value of incomes derived from capital, plus wealth in other forms. For certain purposes, notwithstanding the looseness of all such estimates, it is convenient to have them to our hand, as they check the vagueness of discussions where quantities and relative proportions, as well as qualitative considerations only, require to be taken into account.

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[1] Read before the Economics and Statistics Section of the British Association, held at Southport, September, 1903.

If I were to make the statement, then, that the aggregate of the individual incomes of the people of the United Kingdom is at the present moment somewhere about 1,750 million £, and that the aggregate wealth of the people expressed in a capitalised form may be put at about 15,000 million £ in round figures, if not more, I do not apprehend that there would be much real dispute. The figure as to income is not a great enhancement of the total arrived at by Mr. Bowley in 1895 for the year 1891, and it is very little in excess of the rule of thumb method of stating the aggregate income of the people which has been followed since Dudley Baxter's investigations in 1868, viz.: twice the gross assessment to the income tax, amounting for 1901-02 to 867 million £. The figure as to capital again allows for an addition of 50 per cent. to the total of 10,000 million £ at which I arrived for the year 1885 in my investigations on the growth of capital,[1] since which time there has been an increase of about that amount in the gross assessments to the income tax, which are the principal basis of the calculations as to capital.

But when we come to deal with the rest of the empire there is no such familiarity with data for estimating the income and capital of its various component parts. I believe, however, that if we make calculations as to the aggregate income of the main portions of the empire, based on known data as to production and checking them by data as to imports and exports, yield of revenue and the like as well as by comparison with the figures for the United Kingdom, using also official figures for Australasia, we may arrive at figures which can be provisionally accepted for the purpose of the present discussion. Canada I should put at 270 million £ sterling in round figures, equal to about £48 per head of the population, as compared with £42 which is the figure for the United Kingdom. The Australian Colonies and New Zealand, with a population of 4,600,000, as compared with 5,600,000 in Canada, are put at 210 million £ in round figures, giving practically the same total per head as Canada. There is no doubt, it seems to me, of the larger income per head in these self-governing colonies than there is in the United Kingdom, partly because a larger proportion of their populations is in the prime of life. The figures are at any rate more than supported by colonial estimates of the production of their mines, agriculture, fisheries, and manufactures. India I would put down at 600 million £, which is certainly not a large amount for 300 millions of people; but where the adult ordinary labourer works for about 7 rupees a month, if so much, or little over £5 per annum, that is £1 per head, assuming a family of five persons, it would hardly be safe to reckon that the aggregate income of the people is more than equal to twice the amount per head earned among the labouring classes who constitute the mass of the people. The South African colonies I put at 100 million £, equal to nearly £125 per head of the white population, which is vastly outnumbered by the native, whose labour, of course, contributes to the total. I trust the guess does not err greatly by excess or defect, but the data are of course imperfect in the still unsettled state of the country after the late war. With a few years of peace the totals should be much larger. I have not gone into detail with the other parts of the empire, which are rounded off with a total of 200 million £, but these other parts include such rich depôts as Hong Kong and the Straits Settlements, our West Indian and South American colonies, the Mauritius, and our whole remaining territories in Africa, which are no doubt of great actual as well as potential value. I have been anxious not to exaggerate.

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[1] See "The Growth of Capital." George Bell and Sons, 1889.

Putting all the figures together we get the following estimates of aggregate income for the British Empire:

Aggregate Income.

	Mln. £.
United Kingdom	1,750
Canada	270
Australasia	210
India	600
South Africa	100
Remainder of Empire	200
Total	3,130

The capital or wealth corresponding to this income, allowing it, in the case of other parts of the empire, to be about five or six times the income, which is a smaller proportion than that for the United Kingdom, but where a portion of the capital is already included in the figure for the United Kingdom as a creditor country, would be as follows:

Capital or Wealth.

	Mln. £.
United Kingdom	15,000
Canada	1,350
Australasia	1,100
India	3,000
South Africa	600
Remainder of Empire	1,200
Total	22,250

It will be understood, of course, that these figures as to capital are not figures built up from a multitude of data, but calculations for want of better based on a few data so as to give an approximate basis for the discussion—What should be done with our wealth? As far as the United Kingdom is concerned, I hope before very long to continue the calculations made in former years, but I must leave to younger statisticians to take up the work in detail for the whole empire, for which data will not be wanting.

It must be admitted at the outset that the figures are enormous, and no such economic force has ever been in the possession of a single state or empire. An income of nearly 3,200 million £ sterling and an accumulated wealth of over 22,000 million £ are overwhelming and unimaginable. France and Germany have each probably not more than a third or a half of these figures. Although they approach the United Kingdom alone very closely, they have neither states of their own kith and kin beyond the seas to be added to their home strength, nor an empire like that of India, with many valuable possessions besides. They have the beginnings of oversea empire, but as yet, in comparison with the United Kingdom, beginnings only. Russia is another state which will no doubt be thought of with its population of over 130 millions, exclusive of Manchuria, but its economic development is too primitive to make it come into the comparison notwithstanding its great population. The United States alone, of all modern states, is comparable to the British Empire. Its aggregate income, at about £35 per head only (and it is probably more, though we must allow for the United States average being brought down by the black population and the large immigration of late years from Eastern Europe and Italy), would not be far short of 3,000 million £, while its capital or wealth appears to be reckoned officially at 18,000 million £. It has the additional advantage that, exclusive of the recent oversea additions, it is all within a ring fence. It would not be going too far to say, I believe, comparing broadly the British Empire and the United States with the leading powers next to them,—Russia, Germany, France, Austria-Hungary, Italy, and Japan—that the two Anglo-Saxon states or empires more than outweigh in economic force the whole of the rest of the world. In what way, then, are such forces to be used?

It will not surprise economists, who have of late years given some attention to family budgets, to be told that the income must be primarily used for maintenance

—for food, for shelter, for clothing, for defence against internal and foreign enemies; and that only a small surplus, comparatively, remains for the higher ends of life—for education, for assisting in religious culture, for amusement, for literature, for art, and the miscellaneous objects of civilized existence. But to show how the matter looks on a large scale, I may be permitted to refer to the method and the figures employed in reports to the British Association twenty to twenty-two years ago by a special committee comprising Mr. Jevons, Mr. Leone Levi, Mr. Stephen Bourne, and other distinguished authorities, Mr. Leone Levi being the reporter of the committee.[1] This committee then found that out of a total estimated expenditure by the people of the United Kingdom, amounting to 878 million £, no less than £500,400,000, or 56.9 per cent., was spent on food and drink; £147,800,000, or 16.8 per cent., on dress; £121,700,000 on "house," including house rent, furniture, coal, gas, and water, while, among other items, there were 1.5 per cent. spent on tobacco, 1.3 per cent. on education (less than on tobacco), 1.4 per cent. on church (also less than on tobacco), 0.8 per cent. on literature, 0.6 per cent. on newspapers, and 0.7 per cent. each on "theatres and music halls" and other amusements. This statement, I believe, was obviously incomplete, and defects were pointed out in it at the time, as, for instance, its omission of locomotion and its failure to deal sufficiently with the expense of government, while a farther distinction was drawn between gross and net expenditure and figures differing from the above given for the net expenditure, the total being about 200 million £ less; but the calculations, as far as they go, are most carefully done, and leave no doubt as to what are the main purposes to which the aggregate income of the people is devoted.

Applying and adapting the figures thus given to the present time, I have drawn up a table (see Appendix A) showing an aggregate expenditure (1,386 million £), at the present time for the following objects:

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[1] See "Proceedings" of meetings at Southampton and Southport in 1881 and 1882.

	Millions.	Per Cent. of Total.
	£	
1. Food and drink	468	34
2. Dress	182	13
3. House	223	16
4. National services (exclusive of education	183	13
5. Miscellaneous[1]	130	9
6. Cost of distribution	200	15
Total	1,386	100

According to this, the proportion of the food and drink bill is much less than in the report of the Committee of twenty years ago, which is largely due to the difference in the mode of arranging the figures. If the last item of all—the cost of distribution—were spread proportionally over the earlier of the above items, and the taxes on tea, sugar, beer and other articles were also included with them, the food and drink bill would be more nearly 600 than between 400 and 500 millions. Another cause of the change, however, is undoubtedly the fall of prices since 1880. The community now obtains a larger quantity of commodities for less money than it did. Another point which will attract attention is the large increase of expenditure for the house, largely due to the doubling of the item of house rent in the course of about twenty years. But I do not propose a minute comparison. In any mode of stating the figures the food and drink bill is still much the highest of the various branches of the national expenditure, and the other items follow the order stated twenty years ago.

Of course, a similar table for the whole empire would alter the proportions somewhat. A poor community like India must spend a larger proportion of its resources in food, while our self-governing colonies are exempt from the defence items which constitute so large a part of the expenditure for national services. But it would take us too long, and would be unsatisfactory without fuller detail, to present any comparisons in a tabular form.

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[1] Including 30 million £ for education, 25 million £ for Church, 30 million £ for pleasure, locomotion, etc. See table in Appendix.

Such being the present distribution of national expenditure, in what way does it vary from an ideal, and on what lines should the governing authorities of the empire, and men of light and leading, in private as well as public capacities, direct their efforts, so as, if necessary, to diminish outlay in some directions and increase it in others?

The *first* point which occurs to me relates to the expenditure on food and drink. The total is enormous, and the question may well arise whether in some directions there is not a possibility of retrenchment, with great advantage to the community. If, as some suppose, there is too much consumption of meat and alcohol among the artisan and wealthier classes for the proper maintenance of health and strength, what we have before us in this enormous consumption of food and drink is in part economic waste. *Per contra,* the question will arise, having regard to recent discussions, whether, in spite of the magnitude of the expenditure generally, there are not large numbers of the people insufficiently fed. The recent investigations of Mr. Rowntree and Mr. Booth would seem to point to a conclusion of this sort, though, for one, I must confess myself unconvinced. The dietary of prisons and workhouses, which is found quite sufficient for health, and, with no great additions, would be found sufficient for full work, is not so very expensive. The question is more a medical one than one to be settled in any way by statistics or general comparisons. There is no doubt that the waste in certain directions, if it could be repaired—I refer especially to the drink expenditure—would go far to provide the expenditure on food required for the proper nourishment of some of the children and families who are now insufficiently fed.

The same may be said of our self-governing colonies. They are food-producing countries, they are richer per head than we are, and there can be no general insufficiency of food, though there may be failure in certain directions, in part, at least, owing to causes which are quite remediable.

The general survey of the empire suggests, however, another aspect of the food question. How vast must be the economic gulf separating the people of the United Kingdom and the self-governing colonies from India and like parts of the empire occupied by subject races, when we find that 42 millions of people in the United Kingdom consume in food and drink alone, if we take the expenditure at the retail point (*after* distribution, and not before as in the annexed table), an amount equal to the whole income of 300 millions of people in India! There is no doubt, I believe, that, whatever may be the physiological and climatic reasons explanatory of the condition of the people of India, the degree of poverty of large masses there is a permanent and formidable difficulty of the British Empire, to which more thought must be given by our public men the more the idea of imperial unity becomes a working force. We cannot safely leave those vast populations, for whom we are responsible, in a condition of semi-starvation, and the palliative of famine relief, highly as we must praise the Indian administration for what it does to save life, is not enough. Nothing short of a revolution in Indian agriculture, and a great development of manufacturing for export, will suffice for the diseased condition we have to face; and how such changes are to be brought about, involving as they do a new education of the Indian agriculturist and an enormous influx of capital into India, it is not easy to perceive. But the public at home must understand that until some work like this is undertaken the Indian problem and difficulty remain substantially untouched.

A *second* point arising upon these figures is that of the expenditure upon housing. The sum is very large, and probably in various directions, by individuals and classes, perhaps so much is spent that there is considerable economic waste; but for the mass of the people, as we all know, the housing arrangements are not sufficient for civilized life, or even for good health. Great as the increase in this item has been since the report of twenty years ago—the expenditure being about double what it was, with an increase of less than one-fourth in the population—we must look for further outlay in this direction as the wealth of the people increases. I fear it must be added that the increase of accommodation has probably not been quite proportionate to the increase of expense. While our food bill has been lightened by the fall in prices, the expense of housing has been greatly increased, among other causes by the rise of rent in the neighbourhood of large towns through the steady growth of population, and the monopoly value thus given to areas suitable for building. The expense of building has also been increased, it is said, by the advance of wages in the building trades; but whether this advance is not largely balanced by a fall in materials, or the substitution of different materials, is not quite so clear. At any rate, there seems to be no doubt about the rise in rent, and the permanent causes of that rise, which certainly add to the complexity of the problem of the housing of the people.

A *third* point which arises is in connection with the item of national services. The total, 183 millions, exclusive of education, is certainly a large one, though smaller than either the food and drink or the housing bill. Is economy here possible or desirable, or the reverse, and on what details can there be economy?

As far as civil and local government is concerned, the sum spent on civil government in the United Kingdom, always exclusive of education, appears to be 113 millions, including about 14 millions the expenditure of the post office and telegraph department. Some deduction ought to be made from the latter department for expenditure that is really part of the general cost of production, letters, telegrams, packets, and parcels being all employed in productive business as well as in the processes of consumption, and the same remark applying to postal and money order business. But in any case the amount does not seem enormous for the postal work of so huge a state as the United Kingdom. The remaining expenditure for civil government comes to about 100 millions, one-fourth by the central government and three-fourths by the local authorities. This is all that is paid for judges and law courts, for prisons, for the collection of revenue, for Foreign Office, Treasury, Home Office, and the other offices of central government; and for the miscellaneous work of local government, including sanitation, the management of roads and markets, police, and the thousand and one odds and ends, excluding always education, which is separately dealt with in this analysis, and one or two items such as harbours, where the expenditure is really a charge on business, or like gas and water, where these happen to be municipally managed, as these are dealt with under the general headings of Gas and Water. In spite of all that is said about municipal extravagance, with much justice as I should admit, still on a general survey no great economy on this expenditure seems possible. The remark was made to me long ago by Mr. Walter Bagehot that to some extent the expenditure by local authorities in a state is a test of relative civilization. The more advanced a community is, the more it requires of its local authorities, which constitute the real and effective government in matters that pertain to the daily life of the people, and where the people come into contact with the government. The central government in its foreign business, in managing army and navy, and in supervising administration generally, does not come in contact with the masses in their daily life as the local authorities do. If, then, we find our local government costing a great deal, we may accept the fact as a proof of the advanced condition of the community. As we get richer, should that be our fortune, more will be spent in all probability in this direction, as new wants are certain to arise. After all, 100 millions for internal government—for that is what the figures come to, if we except the post office, where the expenditure is largely productive—is not an enormous amount for a community with an income of 1,750 millions, being little more than 6 per cent.

There remains the sum of 70 millions for army and navy, for military defence. This matter was discussed so fully two years ago in a paper which I read at the London Bankers' Institute,[1] that it seems permissible not to dwell on it now. The principal points may, however, be repeated. Army and navy being defence expenditure, the question of the amount to be spent is for the most part hardly optional. Defences of a certain quality and extent have to be found if the community is not to go under, and the question how much these should cost is really one for experts. Nor does a sum of 70 millions appear overwhelmingly burdensome for a community with an income and capital so great as has been described, the proportion of 70 millions to the aggregate annual income of the people being about 4 per cent., and to the accumulated wealth, on the calculation above made, about 0.47 per cent.—not a heavy rate of insurance. A comparison of the expenditure of the great military nations—Russia, Germany and France—also shows that we spend less and not more in proportion to means. For these and the like reasons, the conclusion seems unavoidable that there is no real prospect of economy in armaments, and that an increase beyond the present amount is not improbable. Always, however, let me repeat, the question is not one about which there is any real choice. The nature of our government tends to cause neglect of these matters. At a given moment we are more likely to be underarmed than over-armed. But no matter what the government, the pressure to arm and prepare for emergencies is always being felt, and must be yielded to with good or bad grace by every government.

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[1] See *supra*, vol. ii., pp. 278-305.

An imperial survey leads to much the same conclusion, and suggests considerations of very grave import indeed. When we go beyond the United Kingdom and inquire as to military and naval preparation in the rest of the empire, we find that India alone makes a substantial addition to the insurance fund, its military expenditure being about 18 million £. Beyond that, it is doubtful whether so much as 5 million £ is spent by the rest of the empire for military defence, although the wealth of the self-governing colonies is so enormously greater per head than of India. The result is that when we make a comparison for the whole empire, we find that the aggregate income as above stated is no less than about £3,200,000,000, and the aggregate capital over £22,000,000,000; and the military and naval expenditure—the insurance premium of this great and rich empire—is no more than 95 million £, viz., 70 millions for the United Kingdom, 18 for India, and 5 for the rest of the empire, that is, a proportion of about 3 per cent. to the income and 0.4 per cent. to the capital. This hardly seems "good business" for a great and widely scattered empire, liable to be attacked on so many points, and to be sundered into numerous fragments, for a time at least, by a bold and enterprising enemy. One of the worst features of the matter is that the contribution by India, whose poverty we have had to lament, is out of sight much greater, in proportion to its taxable capacity, than that of the rest of the empire, although the Indian army is freely used for imperial and general purposes, and is not employed exclusively for local defence.

The remedy is not specially for the people of the United Kingdom to consider, but it is our business to show the way. Apparently our public men of late years have gone the wrong way to work, as they have tried the method of a joint purse, as it were, to which the different colonies have been invited to contribute, at least for naval purposes. But little success seems to have attended this method, which has arrayed against it the optimism of the colonies themselves, more or less removed as they are from the causes of strife to which other parts of the empire are exposed, and their unwillingness to pay a kind of tribute, as the proposed contribution looks like, to be administered by a distant authority. The colonial plan in this matter appears to be much better. Let each part of the empire provide what defence is expedient according to its local conditions, and be encouraged to do its best both on land and water, without any idea of contributions to a distant centre. A great deal has to be done, and both Canada and Australasia, I maintain, are likely to produce better land and naval forces which can be used in time of war, if they are encouraged to do the work for themselves, than if they are to become contributors to our army and navy departments. India remains a difficulty. It is certainly overcharged as compared with any other part of the Empire. But India might gradually be relieved as the local defences of the whole empire are developed and it is really made unassailable at every point.

A *fourth* and last point on which observations occur to me is with reference to education, included in the miscellaneous category. On the face of the figures it is evident that the aggregate expenditure is not sufficiently directed to the higher ends of life, which are included under the heading "miscellaneous." Literature so called and newspapers, as well as theatres and other amusements, with "locomotion" for pleasure, which may be reckoned among "amusements" in a general sense, are estimated to have spent on them about 75 million £ altogether, and although this expenditure includes a great deal which promotes the higher ends of life, the whole amount cannot certainly be so treated. Of the remainder the item of 25 million £ for church may here be passed over with such reflections as may occur to some respecting the smallness of the amount devoted by the people generally to "saving their souls" compared with the vast sums for food, raiment, shelter, and other purposes. This would hardly be the place to discuss what is meant by religion, and whether any special expenditure for "church" is quite the same thing as expenditure to advance or practice "religion." We are on common and surer ground, I believe, respecting education, on which apparently about 30 million £ is the expenditure; that is less than 2 per cent. of the great income with which we have been dealing. Is such an expenditure quite creditable to a wealthy community, especially when it is considered that, apart from primary education, which is no more than the foundation and beginning of the real education of the community, the sums appropriated are quite insignificant? When we extend our view to the empire as a whole, the question becomes more urgent. Considerable sums are spent in the self-governing colonies on primary education of a kind, but the means for secondary and university education are small by comparison. When we come to India, the situation is still more appalling. Beyond a sum of about 2 million £ appearing in the Indian budget for education, Government does nothing for elevating and training the 300 millions under its care, and it is quite impossible that the poor people of India can spare much for private expenditure.

What, then, should be the measure of national and imperial expenditure on education, including in the latter the scientific training of a higher kind and the laboratory investigations of which your President has shown the necessity? One is almost prevented from suggesting large sums at once, for no other reason than the absence of adequate numbers of trained teachers and investigators, which is due to our past neglect; but as soon as possible, I have no hesitation in saying, the country should be spending 100 millions where it now spends 30, or about 5 per cent. of an aggregate income which is likely to exceed before long the total of 2,000 millions, a total, as we have seen, already exceeded in the United States. Of course, there should be a proportionate expenditure in other self-governing parts of the empire, and the condition of India and other parts where there are subject races ought not to be overlooked. Such sums are not really extravagant. Extensive diffusion of education and scientific knowledge and training are not only essential to the greater efficiency of labour and capital by which the means of living are provided, but they are equally needed for the conduct of life itself, for the health and comfort of the workers, their freedom from debasing superstitions and prejudices, their capacity to enjoy the higher pleasures, and their ability to manage all common affairs.

It will be asked, perhaps, how are the necessary sums to be obtained, as few suggestions seem practicable, on a broad survey of national expenditure, for economy in other directions. When it is doubtful whether large numbers of the people are adequately fed and housed, it seems premature to suggest expenditure on other ends which have not to the popular mind so pressing a claim. The answer is partly that the claim for education and scientific training is really more pressing than any other, because it is the means to the end of properly feeding and housing the great masses of the people, and qualifying them as members of an educated community. Another answer is that if we go to work rightly the expenditure will be quickly remunerative. More efficient workers will produce more, and in that way supply the funds for extending and increasing the educational means of improvement. There is yet another answer. One fault of the present time is that people have been taking things too easily. The means for educational improvement must be found, if need be, by longer hours, harder work, and an increase of the national output with the existing methods and machinery. Our populations, in short, have, to some extent, begun to play too soon, and they are not playing in the right way. They are giving to football and cricketing some of the time that should be given to severer employments, among which educational improvement comes first, and the additional labour necessary to find the means for that improvement. The next generation, it may be hoped, will be more laborious, more energetic, more studious, and less athletic than the present, though neglecting in no way physical exercise and amusement so far as expedient for health under the conditions of life of a highly civilized community. It must not be said, however, that what has been suggested is beyond the means of the community. We are rich enough for anything that is really required, whether for defence or for the ends of education, and if there is any lack it can be made good by a slightly greater effort if we only make up our minds to put it forth.

The case of India and of other subject races under the British Empire requires special consideration, owing to the very poverty of the people who have to be instructed and developed. There are obvious objections to grants from imperial funds on an extensive scale, even if such grants were easily practicable. But some grants ought not to be grudged by way of a beginning, as an increase of industrial force among these subject races is essential to the due development of the British Empire itself. We may trust also, as in our own case at home, to the recuperativeness of the expenditure. Increasing industrial power and an increase of means for their further education will accrue to these subject races at once, so that their finances can be organised on a stronger basis. But education is the watchword, and should be the first thought in all our minds.

Having thus fulfilled my promise to your President to initiate a discussion on the objects of the expenditure of national income, may I express the hope, that some attention will be given at future meetings of the Association to the investigation from time to time of the facts as to actual expenditure and the proportions of the total amount appropriated to each object—to the continuation, in short, of the investigations of the Committee of 1881, of whose report I have made such large use? On some points, for some purposes, minute investigations are hardly needed, because certain broad figures are good enough for practical discussion, and there is no greater waste of time than the elaboration of figures where elaboration is not really required. But a more elaborate investigation than anything attempted in 1881, much more elaborate than anything I have now ventured on, would also supply the bases of many useful comparisons. An investigation in detail, for instance, of the "cost of distribution" among different classes of the community for different commodities would yield some interesting and instructive results. The investigations might be carried further, and comparisons made with other countries, so as to exhibit how variously the problems of living are solved. At the same time the difficulties are endless, as expenditure for one purpose overlaps that of another, and there are curious puzzles as to what are "independent" incomes and what are not, and in what way the direct use of commodities and services by the producer, without being the subject of exchange, is to be treated. Some of our younger statisticians and economists, it may be hoped, will be induced to have a "look in" on this topic.

APPENDIX A.

TABLE *showing the Estimated Wholesale Cost of Various Articles Consumed, and of Services Rendered, in the United Kingdom in* 1902. (See Notes appended.)

I.—FOOD AND DRINK.

	Mln. £.
BREAD.—30,000,000 qrs. of wheat, including 23,000,000 qrs. imported at average price of 29*s.* per qr. plus 1¼*d.* per 4 lbs. for manufacture into bread, warehousing, etc. . .	60
POTATOES.—4,500,000 tons, including 287,000 tons imported at value of 1.6 million £	23
VEGETABLES, other than potatoes (including fruit of home production)	25
MEAT, including poultry and game (imports, 48 million £; home production estimated, 82 million £—total 130 million £)	130
FISH.—(Imports less re-exports, 3.5 million £; home production, less exports, 6 million £—total, 9.5 million £) .	9.5
BUTTER, CHEESE, AND MILK.—(Imports, 35.3 million £; home production, estimated, 35.3 million £—total, 70.6 million £)	70.6
EGGS.—(Imports, 6.2 million £; home production, estimated, 6.7 million £—total, 12.9 million £)	12.9
	331.0

FRUIT, imported (including fruit, 10.2 million £; rice, 2.5 million £; spices, 0.9 million £; and confectionery, [?])	14
SUGAR.[1]—(Imports, less re-exports, 33,000,000 cwts., valued at 15.5 million £, but deduct 10 per cent. for quantity used in brewing and distilling, and add allowance for refining at home)	16
TEA.[1]—(Imports, less re-exports, 7 million £, plus ⅐th for landing and warehousing)	8
COFFEE AND COCOA.[1]—(Imports, less re-exports, 3.5 million £, plus ⅐ for landing and warehousing)	4
	42

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[1] See note as to beer.

	Mln. £.
Beer.[1]—(36,000,000 barrels at about £2 per barrel) . . .	70
Spirits.[1]—(45,000,000 gallons at about 4*s*. per gallon) . .	9
Wine.[1]—(Imports, less re-exports, 4.5 million £, plus ⅓ for landing and warehousing)	6
Tobacco.[1]—(Imports, less re-exports, 5.4 million £, plus allowance for landing, manufacturing, and warehousing) .	10
	95
Total of food and drink	468

II.—Dress.

Cotton manufactures (including 5.7 million £ imported) .	42
Woollen manufactures (including 13 million £ imported) .	75
Linen (including 3 million £ jute and linen imported) . .	10
Silk (including 13½ million £ imported)	15
Leather: boots and shoes, gloves, etc. (including 10.5 million £ leather manufactures imported)	30
Silver plate and jewellery	10
Total "Dress"	182

III.—House.

House rent (from House Duty Returns)	145
Furniture	22
Coal (25,000,000 tons at 20*s*. per ton)	25
Gas (from official gas returns, 140,400,000,000 cubic feet of gas, estimated average price 3*s*. per 1,000 cubic feet) . .	21 [2]
Water	10 [2]
Total "House"	223

IV.—National Services.

Army and Navy	70
Post Office	14
Civil List and Civil Administration (less education) . . .	24
Local Government services (less education, gas, water, and other items)	75
Total National Services	183

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[1] See note as to beer.

[2] See note as to gas and water.

V.—MISCELLANEOUS.	Mln. £.
EDUCATION (including 11 million £ Parliamentary grants and 14 million £ School Board rates)	30
LITERATURE	10
NEWSPAPERS	15
CHURCH (including 14 million £ for revenues of Church of England, with estimates for Scotland and Ireland, and for dissent)	25
Locomotion (tramways, 6 million £; half receipts from railway passengers, 24 million £). Total, 30 million £	30
Theatres and Amusements	20
Total miscellaneous	130

VI.—COST OF DISTRIBUTION.	
Cost of distribution (estimate of British Association Committee in 1881, 155 million £, plus about 30 per cent. for increase of population and wealth since 1881)	200
Grand total	1,386

SUMMARY.	Mln. £.
1. Food and drink	468
2. Dress	182
3. House	223
4. National services (exclusive of education, etc.)	183
5. Miscellaneous	130
6. Cost of distribution	200
Grand total	1,386
Add:	
Professional and domestic services, not comprised in other items (say)	100
Amount spent on services resulting in permanent works (investments) (say)	264
Total, equalling estimated aggregate income	1,750

Notes to Table.

In adapting the figures, and to some extent the methods, of the Committee of 1881 to the present time, I have thought it more convenient in showing expenditure on commodities to include only the wholesale cost of commodities consumed, less any allowance for cost of distribution and less taxes, and to show the cost of distribution and the expense of national services as separate items. The final result is, of course, the same as that followed in 1881; but it is important to realize that, taking the community in mass, when a man buys a pound of tea, for instance, or a gallon of spirits, he pays only part of the sum he gives for the tea or the spirits, and that the remainder is paid either for government services or for the expense of bringing it from the wholesale dealer who receives it from the producer, or from the producer himself when there is no intermediary, to the door of the consumer.

It will be observed that two items are added in italics in order to show a correspondence between the aggregate income and aggregate expenditure. But this is merely to "round off," and there is no pretence at exact statement. The question of how professional and domestic services should be dealt with is, of course, a controversial one, but as they are included in the income, an equal sum should appear in the expenditure, less amounts paid for such services included in the cost of production and distribution. The services, as for builders and others, which result in permanent works, really represent an investment of capital, to which the services of a certain portion of the community have been appropriated. They have created so much which is not consumed. The increase of capital since 1885 having been about 5,000 million £, or 277 million £ per annum, the figure of 264 million £ here shown as the annual investment at the present time is fairly justified. Probably the figure is lower than it ought to be, and a higher estimate of income should have been worked up to.

With regard to particular items, I have to make the following observations supplementary to the information contained in the table itself:

Bread.—The value of wheat and wheat flour imported in 1902 was 36 million £ sterling, the quantity being 81,000,000 cwts. of wheat and 19½ million cwts. of flour, or about 108,000,000 cwts. in equivalent cwts. of wheat alone, giving a price of 6*s.* 8*d.* per cwt., and about 29*s.* per quarter. The home produce, estimated at 7,000,000 quarters, gives a sum at the same price of about 10 million £—total, 46 million £, making, with the addition for manufacture, etc., a total of about 60 million £ as here stated. It is an omission, perhaps, as it was in the Report of 1881, that nothing is put down for oats and other grains used as food, but the omission seems immaterial for the present purpose, especially as we should have to make a deduction, if the matter was gone into minutely, for home wheat consumed by cattle and not used as human food. The heading "bread" of course includes biscuits and other manufactures from wheat.

Potatoes.—Imports, about £5 10*s.* per ton, 1.6 million £. Home production for household use at 2 cwts. per head of population, 4,200,000 tons at, say, £5 per ton—total 23 million £. The estimate of 2 cwts. per head of population was given by Mr. Turnbull before the Commission on Depression in Agriculture (see "Minutes of Evidence," vol. iv., p. 546 *et seq.*). His average price was £2 12*s.* 6*d.* only, but I retain a figure more closely approximating the Report of 1881.

Vegetables.—Mr. Turnbull's figure for 1892-93 for home vegetables and fruit was 21 million £ (see vol. iv., p. 543 of "Minutes of Evidence" above referred to). Adding 2½ million £ for import of vegetables other than potatoes, and an allowance for vegetables and fruit grown at home apart from "farming," the figure stated does not appear excessive.

Meat.—The imports for 1902 are as stated. Mr. Turnbull's figure for meat produced at home in 1892-93 was 72 million £, and allowing for poultry and game in addition, the figure of 82 million £ cannot be far wrong. An exact comparison cannot be made, as he includes poultry with eggs, and makes no allowance for game. The quantities are about 21,000,000 cwts. foreign, and 27,000,000 cwts. home, the home proportion being that given by Mr. Crawford in his paper at the Statistical Society in 1899, which does not, however, include poultry and game.

Butter, Cheese, and Milk.—According to Mr. Crawford in the above paper, the home production and foreign imports of dairy produce appear to be about equal. Mr. Turnbull's figure for home dairy produce in 1892-93 was 32½ million £.

Beer.—The Report of 1881 gave a figure of 75 million £, allowing for much the same consumption per head as at the present time. The proportionate figure now would be 90 million £, but this includes a large allowance for cost of distribution, which appears to be as much as 46 million £ on the total of 75 million £ in the Report. This appears rather excessive, and I believe the figure here assumed will represent a better average wholesale price. It will, of course, be observed that taxation here is not included.

Spirits, Wine, Tobacco.—These are all lower figures than those in the Report of 1881, for the reason given above as to beer.

Nothing has been included for "mineral waters" specially, as their cost is partly accounted for under the heading of sugar and other items, and cannot be a large figure wholesale.

Cotton.—The figure in the Report for 1881 was 31 million £, which included 20 per cent. for cost of distribution; but since then the home consumption of cotton, according to the circular of Messrs. Ellison, has risen from 184,000,000 lbs. to 300,000,000 lbs., or 60 per cent. at much the same price. The estimate in the Report for home cotton in 1881, exclusive of cost of distribution, was £22,800,000, which would now be increased to 36½ million £ in proportion to the increase of raw cotton used. Adding to this £5,700,000 imported, and not adding anything for cost of distribution, we get the total of 42 million in round figures.

Wool.—The amount of wool taken for home consumption according to the circular of Messrs. Helmuth Schwarz and Co., appears to have been about 525 million lbs. per annum in the last five years. The exports of manufactured goods have not increased since 1881, when the report was presented to the British Association, and as the quantity taken for home consumption was then 390 million lbs. on the average, giving a production of home manufactures amounting to about 56 million £, there seems reason to believe that a proportionate increase would give us the figures of 75 million £ as the value of home manufactures at the present time. Adding 12 million £ for woollen goods imported, the total is 87 million £. Deduction, however, must be made for woollen manufactures not for dress, about 20 per cent. apparently, according to the Report of 1881, which leaves a net figure of about 70 million £. This figure ought, however, to be increased to allow for a diminution in the consumption of wool for export manufacture, giving a larger amount for home consumption, and I have put it at 75 million £.

Leather, Silver Plate, etc.—No detailed computation here, but an addition allowed for increased consumption since 1881.

House Rent.—The figure is for residential housing only, all other "houses" being deducted. It is double the figure for 1881.

Furniture.—Double the estimate for 1881, corresponding to great increase of house values.

Gas and Water.—The figures as to gas and water have been compared with the Local Taxation Returns, the return "Municipal Corporations' Reproductive Undertakings" (No. 398, Session 1902), and the return as to "London Water Companies" (No. 286, Session 1902). There are some discrepancies in these returns, and no special estimate has been made for electricity and oil, as gas and electricity are used for power as well as light; oil is also used for enriching gas. The gross figure for gas alone is thus allowed to stand for the "group."

National Services.—The figures here are necessarily taken from the budget and local taxation accounts, with some adjustments in respect of education and other items. There is no figure put down for payment of debt interest, as that is not payment for a "current" service, but a mere transfer from A to B among the various members of the community.

Miscellaneous.—The figures of 1881 have in most cases been doubled, increases having taken place in all directions; and for "locomotion" there is a still larger estimate, that being an item omitted at first in the estimates for 1881. There are hardly data for a thorough statement under this head, except after a most elaborate treatment.

XXX.

THE DREAM OF A BRITISH

THE federation or closer political union of the British Empire is obviously so important that proposals to stimulate or accelerate it by means of commercial union appear specially attractive. They are much in the air at the present time. It is to be feared, however, that public opinion to some extent is taking a wrong direction, in which the end aimed at may be missed and great mischief follow.

The expediency of political federation itself may be assumed. It does not receive quite the general assent which it ought to command. There are not only "Little Englanders" who would like to see the Empire broken up; but not a few besides, whose love for the State and regard for the Empire are beyond doubt, lament the tone of Imperialistic feeling which prevails and the accompanying ideas of policy, as contrary to the traditional feeling for liberty characteristic of our race and history. These doubters dislike the new atmosphere, and are discouraged by the burdens which Imperial policy seems to entail as well as by the attacks on Free Trade and other parts of the general policy of freedom in which some of the most forward Imperialists love to indulge. But while appreciating the state of mind of this minority I cannot share their doubts. The necessity for Imperial Federation is so great and overwhelming that all good citizens should join in promoting it. The broad reasons are the sentiment of national unity which makes a British subject settled anywhere under the common flag regard his colony as one with the mother country; and with this the instinct of self-preservation which makes it

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[1] From the "Nineteenth Century" of May, 1902.

obvious that in these days of great military and naval empires the lives and liberties, and possessions, of English people throughout the world are nowhere safe from military aggression unless the whole are united for common defence. South Africa would probably be German or Dutch-German at the present moment if our fellow-subjects there had not had the help of the whole empire. Australia would be exposed to similar risks from French and German ambition without a great Empire with it and behind it. Our own position in Europe would certainly be most insecure if we were Great Britain and Ireland only, and could not call upon our kith and kin beyond the seas or exercise the force of Empire in distant lands. In spite, then, of many faults of logic and argument among advocates of Imperial Federation, the policy, in my view, should command universal assent. It is unwise and unpatriotic to stand aloof.

It is with this opinion about Imperial Federation itself that I propose to criticise some of the suggestions as to commercial union which are put forward as means to the end. Federation is to be reached mainly, I believe, by political changes, assisted, where this can properly be done, by commercial arrangements, but not by the commercial arrangements which are most discussed and most in people's minds, such as an Imperial Zollverein, or what are called "preferential" arrangements between the mother country and the colonies.

As with many other subjects, a historical retrospect may help to show us where we are. The idea that commercial union inevitably tends to political union, and is the only or best way to arrive at such union, has a slender enough foundation historically.

In older political unions there was little question of mutual commercial advantages. The different provinces of France, for instance, were politically united long before Customs barriers ceased to exist between them. The political union of England and Scotland, again, began to take effect in 1603 by the union of the crowns, but separate Customs continued not only till the formal legislative union a century later but long after. Ireland, though subordinate to the crown of England (and afterwards of Great Britain), was commercially separate till the union of 1800 and even later. One of the Irish grievances is, in fact, the commercial legislation first of England and then of Great Britain directed against Irish industries. In the same way commercial union with colonies was the last thing thought of until modern times, the exploitation of colonies by and for the mother country being the ideal. The distinction between the idea of political union and that of mutual commercial advantages has thus been complete in past times.

There are cases, moreover, in modern times at least, of commercial unions between politically separate entities, which were not intended to lead up in any way to political union. For many years, as is well known, a Reciprocity Treaty existed between the United States and Canada, in spite of their political separation. In the same way, in South Africa before the war, there was a Customs union between Cape Colony, Natal, and the Orange Free State, although the latter was an independent republic. To the same order of arrangements belong, I think, the special regulations between Austria-Hungary and Roumania and other Danubian States for trans-frontier trade; and similar arrangements between France and China as respects the frontier trade between Tonquin and Southern China. There is no question of political union in the matter, but there are arrangements for frontier trade more or less resembling a Customs union.

In this way the precedents are complete for treating political association and commercial association as different things, and as not necessarily involving and implying each other. The assumption that political union follows commercial union is, theoretically at least, incorrect. It appears to be largely due, in reality, to the frequency with which undoubtedly commercial union has followed the political union of separate States, and to one important instance in which a Customs union, that of the German Zollverein, has contributed to the consolidation of an empire; but the cases of the former description are not to the point, while the single instance of the German Zollverein is not enough to prove that Customs unions always conduce to a closer union of a political kind. According to former experience, the commercial union of the British Empire—in time—will follow the political union; but how far mutual commercial arrangements will assist such an object will depend on special circumstances and the nature of the arrangements themselves, which are all matters for investigation.

Looking at the problem in this way, we cannot but recognise that the commercial union of the British Empire, meaning thereby a real Zollverein, or such a union for commercial purposes as exists between the different states of the United States, or the different provinces of the German Empire, in which the same commercial laws prevail, the same money exists for all purposes, and, above all, there is a single Customs barrier against the rest of the world with all internal barriers abolished, must in the nature of things be somewhat difficult. The number of separate legislatures necessitates so many separate commercial codes, which can only be fused into one by common agreement, or by the invention of devices like those of the American Constitution, by which certain subjects are reserved for a central congress. The same remark applies to money which is reserved for the central Government by the Constitutions of both the German Empire and the United States, but has not yet been reserved in the British Constitution, while there would be special difficulties in having a common money in the existence of places like Canada, which happens to lie within the radius of the United States banking system, or Gibraltar, which cannot avoid having Spanish money for common use, or India, which has the rupee for monetary unit and cannot get quit of that unit, or Egypt, which is technically a part of the Turkish Empire and not even a British State. The remark is even more applicable to the subject of a Customs union. This subject is not reserved for a central body by a political constitution as it is in Germany and the United States, while there are obvious practical difficulties which do not exist in those countries, and which would make the establishment of a Customs union impossible even if the central Government had power to deal with the matter. The difficulties are as follows:

(*a*) The physical separation of the different parts of the Empire. The sea, it is said, unites and does not separate, which is true in a sense, but is not true for the purpose of a Zollverein. That purpose is the abolition of Customs barriers where they are most irksome to trade—that is, between adjacent places. This irksomeness, as we have seen, is so great that it has led in some cases to such arrangements as those existing on the Austrian and Southern Chinese frontiers, or such an arrangement as the former Reciprocity Treaty between Canada and the United States. There is a real practical evil which a Customs union deals with in the most effective manner, and, although the sea unites the separate parts of the British Empire, it does not unite them in such a way that the inconvenience of Customs barriers is felt as it was in the trade between the different states of the American Union, or between the different provinces of Germany, or is felt now between any countries having a long land frontier between them. On the contrary, the longer the voyage the less important are the Customs barriers relatively as an obstruction to trade. The long voyage itself and the transhipment, which cannot be got rid of, are the real evils caused by distance in over-sea communication, and not the intervention of the Customs, serious as the latter intervention may be on a land frontier across which there is trade at many points. A Zollverein, therefore, comprising states or provinces separated by great breadths of sea, could not give them the special advantages obtained by a Zollverein between contiguous places. Customs regulations, moreover, must still continue to exist at the ports, as they do even in coasting trade, so that, as far as they are an evil, inter-Imperial trade would still be affected by them.

(*b*) The variety of race and business which makes it expedient for different parts of the Empire to have each its own tariff, even against other parts, if it is to raise revenue by indirect taxes, which all must do. The Indian Empire is obviously so constituted that its inhabitants cannot be brought into line as consumers with the European populations of the British Empire. These populations provide indirect revenue mainly by the consumption of spirits, beer, tobacco, sugar, and tea; and sugar alone among these articles is extensively consumed in India. The people of India, again, are subject to a tax on salt not usually imposed on populations of English race. Still worse, although the Indian people consume sugar, the article with them is also an important article of widespread agricultural production, which would bring the tax-gatherer into close and unwelcome contact with masses of the people if a duty on sugar were imposed. On the other hand, India is a producer of the tea and coffee which are not worth taxing in India, but are a stand-by for finance Ministers in other parts of the Empire.

The self-governing colonies, again, in contrast with the United Kingdom, naturally desire to impose duties for purposes of revenue on the manufactures which they import mainly from Great Britain; while in Great Britain, among the articles most suitable for taxation are to be found the tobacco, tea, coffee, and sugar, which are largely produced in the colonies.

Unless each part of the Empire, therefore, is to arrange its own tariff, it will be extremely difficult for it, if not impossible, to raise suitable revenue by means of indirect taxes.

(*c*) This last difficulty is enhanced by the consideration of the "pooling" arrangements among the different

States which are the indispensable adjunct of a Customs union. The idea is that no province of the union is to have a Customs barrier against another part. Duties are to be levied in common. There must be a common purse, accordingly, not only for the Customs duties which are to be imposed on articles imported from the rest of the world, but on similar commodities produced at home. In other words, the Customs and Excise revenue of each part of the union is to be dependent on the vigilance of the revenue authorities in every other part. In such a union for the British Empire, our spirit revenue, for instance, would depend on the vigilance of authorities in Australia and South Africa. And then out of the common purse each State of the Empire would receive its share. In what way the shares are to be fixed, with heterogeneous populations like India concerned, will be no easy matter, and it will be still more difficult to provide the automatic re-adjustments, according to the changes in population at each census, which existed in the German Zollverein.

(*d*) Difficulties arising from the uncertain political status of States or Provinces which form a portion of the Empire as far as the burden of defence is concerned, and which are popularly reckoned as within the Empire; but which are either not internationally recognised as part of the Empire at all or are subject to special arrangements by political treaties, as, for instance, our West African Protectorates. The doubtful position of Egypt has already been referred to in connection with the question of common money, but in the question of a Zollverein the status of that country would be still more embarrassing. Egypt is legally a part of the Turkish Empire, and it is bound by various international stipulations of that Empire as well as stipulations special to itself as regards shipping and navigation. To make it part of a British Zollverein would involve prolonged negotiations with European Powers that would almost certainly fail, or a rupture of treaties in time of peace involving a risk of war and the equally formidable mischief, perhaps, of throwing doubts on English good faith in carrying out treaties, however disagreeable sometimes their stipulations may be. The Soudan, which we hold in common with Egypt, could perhaps be included in a Zollverein more easily; but how odd a Zollverein of the Empire would look with large parts of it outside the union, and especially a part like Egypt, the strategical centre of the Empire itself.

Such difficulties existing, however, they should be carefully thought out by those who talk of a Zollverein or Customs union for the British Empire before we can even get to business in the discussion. I confess for one my inability to imagine how they are to be overcome. There appears to be no help to a solution in any proposals put forward, as far as I have yet observed.

Passing from this question of a Zollverein, we come to the proposal of "preferential arrangements" in the matter of tariffs between the mother country and the other parts of the Empire. Such arrangements, it is supposed, will effect the same objects as a Zollverein—viz., a closer commercial union, which will also have the same political results as are expected from a Zollverein itself. Such is the abuse of language, that many people when they hear of an Imperial Zollverein are really thinking of a Customs barrier set up in the Empire against foreign countries, leaving the barriers inside the Empire intact, and are not really thinking of a proper Customs union at all.

All such proposals have a common character, so that it would be a waste of time to go into detail. To state their nature is surely to show their ineptitude. What is proposed in effect is a commercial treaty between the colonies and the mother country on a reciprocity basis, each colony consenting to tax differentially certain articles it receives from foreign countries in competition with similar articles received from the mother country or the rest of the Empire, and the mother country in turn taxing differentially certain articles received from foreign countries in competition with articles imported from the colonies. The business is to be arranged on the *Do ut des* principle, and the effect is to be the increased mutual dependence of the different parts of the Empire and their increased joint and several independence of foreign countries.

Such suggestions involve the certainty of injury to both the colonies and the mother country if they are tried, and the uncertainty of any advantage whatsoever. Each part of the Empire is to divert a portion of its trade from the channels in which it naturally flows, a procedure necessarily involving loss, and it is to have the same trade afterwards inside the Empire, only at greater expense. Political advantage may conceivably ensue in the end from the different parts of the Empire sticking closer together even in this way, though it appears unlikely; but there is no commercial advantage at any time. But as to the political advantage, where there is no commercial advantage, may there not also be doubts? One or the other party must be exposed to extreme deception. If the colonies get a better price in the mother country for their raw materials and articles of food than they would otherwise do, some people in the mother country will have to pay more, and it will have to be very clear indeed that they got a *quid pro quo* either in higher prices in the colonies for what they sell or increased profits from large trade with them. At the time of the famous Hofmeyr suggestion that the colonies and the mother country should impose a special tax of 2 per cent. *ad valorem* on all imports from foreign countries, a duty calculated to yield about £7,000,000, which could be appropriated to purposes of mutual defence, I recollect making a calculation, (1) that the portion of the £7,000,000 paid by the United Kingdom would be nearly the whole, (2) that the price of the commodities imported into the United Kingdom from the colonies as well as from foreign countries would be raised by a larger sum, and (3) that the colonies contributing a small part of the amount would be more than compensated by the higher prices obtained for their produce in the United Kingdom, while the mother country in turn would obtain no such compensation from higher prices in the colonies on its exports to them, owing to the small proportion of such exports with which foreign countries really competed. Disillusionment must thus follow any reciprocity arrangement of this sort. Instead of tending to political union, it will almost certainly have the reverse effect.

Quite as serious is the prospect of bad blood with foreign countries, especially with the United States, if we make any arrangement with the colonies which in fact leads to a serious diminution of our trade with foreign countries—the means by which the arrangement is to achieve its end. Could we view without alarm the discontent that might be produced in the United States, with which we desire to promote the most friendly relations, if we differentiated against their wheat, meat, cotton, copper, and other articles for the sake of what we hope our colonies will give us? The mere attempt, even if it should fail, would tend to exasperate. It is quite true, of course, that the United States—and our leading foreign competitors—would technically have no cause to complain. Their own tariffs are as great a discouragement to trade with the United Kingdom as they can be, and have been so for many years. But as a matter of fact we cannot hope to export to them much more largely than we do, even if their tariffs were now as free as our own, so that we lose little by their discourtesy, while we should certainly lose by an increase of political animosity, if we imitate their example, and possibly better their instruction.[1]

It is a supreme interest with us, again, to promote foreign trade, not only that food may be cheap but that we may have the necessary raw materials for our industries. There is no prospect in reality that the colonies, from which we import about £110,000,000 annually and to which we export about £102,000,000 annually, could really for generations take the place in our trade of foreign countries from which we import £413,000,000 annually and to which we export £252,000,000 annually.[1] How are the colonies to do it? Even to take the place of foreign countries to a very partial extent would involve a complete revolution in the conditions of their industry, and an enormous increase in their population which is quite inconceivable.

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[1] See the statements in the "Times" of the 16th of April quoted from the "New York Times" as to American retaliation on Canada if it receives preferential treatment in the United Kingdom.

Apart from the quantity of our purely foreign trade, there is another difficulty in the way of a proposal to substitute colonial trade for it. No country or empire in the world produces every kind of thing it wants; and the British Empire is no exception. However united the Empire may be, the United Kingdom must still go outside for many things—to Spain for iron ore, to the Dutch East Indies for tin, to the United States and Spain for copper, to the United States for raw cotton, and so on. Either foreign countries are the sole producers of such articles or the only producers in quantities necessary for business. It would be no light matter, therefore, to penalise our foreign customers, and make access to their markets more difficult than they make it themselves.

Reciprocal or preferential arrangements between the mother country and the colonies are accordingly most dangerous, economically and politically. It is a complete misconception that they are of the same nature as a Zollverein, which is a measure of pure free trade, but happens not to be possible for the British Empire as a whole.

While the advocates of commercial union as a means to Imperial Federation have thus mistaken their way, and suggested measures that are either impossible or will defeat the object aimed at, the advocacy itself has been hardly less mischievous. The cause of federation of the Empire has come to be identified with a policy of Protection until adherents of a Free-trade policy are almost under compulsion to choose between the abandonment of their ideas and the promotion of Imperial Federation itself. This is not a desirable result. Whether the commercial policy of the federated Empire is to be Protectionist or Free-trading, federation itself is a good thing for sound political reasons. For those who desire it, therefore, to put in the forefront of their arguments a commercial policy which arrays against them large masses of the very people whose co-operation they desire, is a mistake of no small magnitude. It lays them open to the charge from which I fear some of our colonial friends could not easily clear themselves—that it is Protection they seek by means of federation and not federation itself. I recollect first coming in contact with this idea twenty years ago at a dinner in the club at Montreal, when I was obliged to listen to a very heated argument by leading citizens in favour of a preferential duty of 2*s*. 6*d*. per quarter in England on grain from the United States as compared with grain from Canada, an argument so heated that a modest speaker could hardly get in a word edgeways on the other side. Such heat is still observable in colonial arguments for a "preference." They want a "pull," an advantage of some kind out of the mother country, not for the sake of federating the Empire, but because they want Protection so much. They offer hardly any *quid pro quo* which will stand discussion; but even if they did it is surely most lamentable that colonial appeals to the mother country to federate should be mixed up with bargaining on the lowest level of any commercial transaction.

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[1] Excluding in both cases the transhipment trade and imports and exports of gold and silver.

As I write additional evidence is furnished us as to the anxiety in the colonies for Protection. Only the other day Mr. Seddon was reported to have said that the attachment of New Zealand to the mother country was not sentimental, but was based on *£ s. d.* The mother country bought New Zealand mutton, and that was the reason why. No one would attach too much importance to a casual expression in conversation, even if true, but that it should be reported when Mr. Seddon is coming home to advocate his ideas of preference is not quite pleasant reading for friends of Imperial Federation on patriotic grounds. At the same time, we hear from Canada that Sir Wilfrid Laurier has refused an invitation to an Imperial Conference to discuss the subject of defence—surely the main problem of federation—though he was willing to discuss the subject of commercial relations. The Opposition in the Canadian Parliament in turn have complained of the Prime Minister (in long debates), that, if he had acted differently, Canada might have received exemption from the new corn duty, with more of like favours to come. Thus it is always Protection that is being argued for, and not so much the federation which is professedly the excuse. Not only, then, is the cause of Imperial Federation being sought by means of preferential arrangements which will tend to frustrate the object, but the argument is all in the wrong key, and tends very strongly to set against the cause some powerful influences that should be wholly in its favour.

How is federation to be promoted, and what sort of commercial arrangements, if any, will really assist? While rejecting the notion of a Zollverein because it is impossible in the peculiar circumstances of the British Empire, and while rejecting most strenuously the notion of preferential arrangements as economically and politically dangerous, and deprecating the line of argument by which the latter policy is supported as additionally fatal to the prospects of success in promoting federation by means of commercial union, I believe that in various ways such a union may be promoted with mutual advantage to all parts of the Empire, including the further advantage of accelerating a closer political union. We ought to see, at any rate, what can really be done, and walk warily, avoiding above all any obsolete fiscal ideas such as are involved in Protection.

The initial step should be, I think, the recognition by the colonies of the immense aid that has been given to commercial union throughout the Empire by the Free-trade policy of the mother country itself. Just as our Free-trade policy has undoubtedly benefited the whole world because trade with the British Empire is the main part of the foreign trade of every country, and, however Protectionist other countries may be, their foreign trade on one side at least has been carried on under conditions of freedom; so we may contend that the colonies of the United Kingdom which do so much of their business with the mother country have specially gained. The most natural channels for their business have not been interrupted in any way by the policy of the mother country, but mutual trade has been facilitated in the highest possible degree. Colonists may think that the mother country in addition should have given them some bonus or premium to trade more with them, but at least they have not done badly. There is no colonising country in the world, as they must admit, with which they would have done half so well.

From this to the further admission that Free Trade must inevitably be the policy of the British Empire ought not to be a long step. If the United Kingdom is for Free Trade, surely it is a great mistake for self-governing colonies, having only a fifth of the population of the United Kingdom, to try to force the mother country into their way, and drag the rest of the Empire with them. Whatever else may be said for Free Trade, it is at least a uniting force. It does not promote political by means of commercial disunion. It may not promote peace and harmony to the extent Cobden anticipated, but it does help towards these ends. As the hope of the world must still be in peace, therefore, the colonies of a Free-trade Empire can hardly complain that the mother country is attached to a policy which tends to the breaking down of barriers between nations as well as between the separate parts of some nations. As their views of policy enlarge they ought to perceive that many things have to be considered between States besides momentary advantages of the market which may bulk very largely in the eyes of small communities. Larger horizons and larger ideas belong to the politics of Empire.

One of the first points to be determined when the colonies and the mother country are in council cannot but be this question of Free Trade or Protection as the policy of the Empire; and it is the colonies and not the mother country that should give way. Their so doing will be the first step to Imperial Federation, which will hardly be possible on any other footing.

I would next suggest as a help towards commercial union, and as being, in fact, a union of that nature as far as it goes, the formation of an intimate postal, telegraph, and *communication* union, independent of, though not opposing, postal and telegraph agreements with foreign countries. The means of communication between different parts of the Empire should not only be promoted in common, but as much as possible the general direction should be the same. As far as postal and telegraph communication is concerned, it may be assumed, all will be agreed, but the question embraces much more than merely posts and telegraphs. Railways in certain directions, as for example between South and North Australia, or the Cape to Cairo Railway, or the Canadian Pacific Railways, are of interest to the whole Empire. In the same way, I believe it is an Imperial concern that shipping communication between the different parts of the Empire, not only for mails but for the conveyance of goods and passengers, should not be left mainly to chance—as is now practically the case. Steam-shipping subsidies are too exclusively settled as mail subsidies from the departmental view of the Post Office, whereas there are other considerations of a vital kind for the Empire that should not be overlooked. If we are to be a united Empire, the whole body should be knit together by lines of steamers under the Imperial flag which omit no port of consequence, present or prospective, in their visits—direct lines of steamers, for instance, between *East* and South Africa and the mother country, or between East and South Africa and India, Australia, and Canada. In this matter we must add, after the evidence laid before the Shipping Subsidies Committee, that the Imperial authorities, hitherto, have been remiss. "Unconsidered trifles" of trade between British ports have been left for our German friends to pick up, and the employment of British shipping, essential to the life of the Empire, has been correspondingly diminished or checked. This ought not to be. Adequate shipping facilities under the British flag should be provided between all parts of the Empire as a matter of the common business of all. A special union for such an end, besides the immediate good it would do, would clearly help towards a more general federation.

Monetary union, again, should be promoted as far as practicable, and the subject, at any rate, should be studied in common. A complete union for this purpose, at any rate for a long time, for the reasons already given, appears to be out of the question. But the money of the mother country is already the money of South Africa and Australia, and there are some points in which these portions of the Empire are mutually interested with us, such as the division of the profit on token coinage and the arrangements as to the intrinsic value of such coins, which ought not to be left, as they now are, to the decision of the mother country alone, or to be matters of direct correspondence and bargain with each colony. A complete monetary union is also more likely to come about all the sooner if it is a subject of regular official discussion.

Similarly, there could be unions within the Empire for identical legislation in each part as to the various subjects of commercial law—bills of exchange, marine insurance, shipping law generally, bankruptcy, copyright, patents, trade marks, and so on. The business could only be promoted by mutual agreement; but even internationally agreements on some of these matters have been made, and with a decided impulse towards unity in the Empire they should receive a great extension, pending the establishment of an Imperial constitution which would give to a central council some direct legislative power.

Another step that might be taken would be the common negotiation of all commercial treaties, so that no treaty could be made that did not bind the whole Empire on the one side, and did not bind each foreign Government to the whole Empire on the other side. In other words, the unit in all negotiations should be the Empire as one State, so that foreign Governments should not have the chance of recognising different States as existing within its bounds. Everybody was shocked the other day by the reappearance in the Brussels Sugar Convention of a clause binding the mother country to levy the same duties on colonial sugar as on sugar from foreign countries—the same sort of clause that had been the object of adverse criticism in the Belgian and German treaties and had led to the denunciation of those treaties. Against all such possibilities in future the Empire should be prepared, which can only be done effectually by our diplomatists insisting on Imperial unity. It would clearly follow from this arrangement also that the Foreign Secretary should be continually advised, not only by his own permanent officials but by representatives from all parts of the Empire. The misfortune is that some States which are really portions of the Empire, like Egypt, would have to be left out. This exception is rather a serious one, as we have seen, in forming a Zollverein. But it would not be fatal to a union as far as it goes for different purposes between all those parts of the Empire which are internationally recognised as such.

In these different ways, then, I believe, a beginning could be made with an effective commercial union which would tend to unite the Empire and not to dissolve it, and would prepare the way for a formal federation. The condition of most of these arrangements, it need hardly be pointed out, would be the formation of a Council of the Empire, which would consider among other things the whole question of Imperial communications, monetary union, assimilation of commercial law, and finally the negotiation of commercial treaties for the Empire as a unit. At this point we touch upon the more political side of federation. A council of the Empire is as obviously required for purposes of common defence, and for promoting the general welfare of the whole body, as it is for commercial union. By suggesting a variety of matters, therefore, for consideration and treatment, we bring the idea of a council more and more within the sphere of practical politics and with it the question of Imperial Federation itself. Preferential arrangements, as many people are so much attached to them, especially our fellow-citizens in the colonies, would probably enough come up for discussion in such a council; but the existence and usefulness of such a body would be quite independent of that subject, while the discussion might even be of advantage by compelling every side to face the difficulties and to make sacrifices all round for the sake of the common Empire. [1902.]

XXXI.

THE PRESENT ECONOMIC CONDITIONS AND OUTLOOK FOR THE UNITED KINGDOM.

WHAT is the economic outlook for the United Kingdom at the beginning of a new century, following on a century of astonishing material development and several centuries of steady advance? Is the country "played out," as many seem disposed to believe; or are the general conditions still favourable to economic advance and prosperity? The inquiry, apart from political issues, may perhaps not be uninteresting as necessitating some discussion of the conditions of prosperity among industrial communities.

In entering on such a discussion I wish to make clear, what is hardly recognised popularly, but what is really of the essence of any consideration of the general welfare of a country, that the bulk of the exchanges in every community, with rare exceptions, is, and must be, not between the community and the outside world, but among the members of the community themselves. The main quantity of business is in fact always local. The members of the community mainly work for each other and exchange services with each other. The butcher, the baker, the tailor, the dressmaker, the builder, the house decorator and furnisher, the makers of gas and electricity, the doctors, the lawyers, the clergymen, the staffs of newspapers and periodicals, the public entertainers, the postmen, the railway and tramway servants, the hairdressers, the laundry women, and many more servants of the community, whatever raw materials and implements they use, do in fact work on which a great deal, if not the greater part, of the comfort and enjoyment of life depends.[1] Yet all this work is necessarily local; and this characteristic equally belongs to such industries as agriculture, mining and fishing, so far as a community possesses lands and mines and fisheries of its own. It follows from this that the prosperity of every community, if it has the means of obtaining *ab extra* certain essential commodities for use in other production, or which are considered indispensable in consumption according to the scale of living suitable to the degree of civilisation arrived at, depends solely on the mutual industry of the members of the community itself. There is nothing mysterious about the matter. If the butchers, the bakers, the tailors, the dressmakers and all the others are each competent and industrious in their own calling, the whole community will reap the benefit, no one to say them nay. Whatever foreign tariffs and foreign bounties may be, the community itself has its own affairs and its own prosperity substantially in its own hands.

The condition laid down is no doubt important and is of varying degrees of importance in different communities. It is conceivable theoretically that a given community might have so much difficulty in producing things necessary for it to obtain *ab extra* what is indispensable to its existence that no course is open to it but emigration from the unfavourable spot; but in practice there are no such communities of any real importance.[2] The distribution of natural resources and hereditary skill and expertness is such that no important communities exist which do not possess or produce something useful to others, and by which the things it wants *ab extra* can be more or less readily obtained.

Objection will be made by some that this mode of surveying industry is too sweeping, because it lumps together primary and secondary industries, productive and unproductive, productive and distributive, independent and dependent, and so on; whereas the industries of a community are not in fact all on an equal footing, and those that are "primary," "productive," and "independent" come before the others. If an industrial community has not a sufficient share of these, it is said and thought, it cannot exist at all. I must maintain, however, in agreement, I believe, with the best economic authorities, that these distinctions have no foundation in the nature of things economically considered. The one condition necessary to separate existence is the ability to obtain abroad certain things which are in fact required by a given community. Thus a garrison town exists with a population three or four times that of the garrison itself, and whose expenditure, out of means brought to it *ab extra*, enables the whole town to procure the foreign things it wants. In the same way such "pleasure" towns as Brighton, Bournemouth, Hastings, Eastbourne, Southport and Scarborough, and a large district of country like England south of the Thames, with hardly any "primary" industries, subsist by means of wealthy residents who procure from outside not only the means of employing the local population, but the means of giving to that population all that it wants *ab extra*. Populations like those of Klondyke and other mining districts are even more instructive in their character. A single primary industry enables such a community to obtain from abroad what it requires, including a great deal with which it might and would supply itself but for the very productiveness of the primary industry itself. Of course a great state requires much more to be politically as well as industrially independent; it is so far unlike a small community which is only concerned with its economic independence; but the principle is the same as far as the economics of the question are concerned. The things we have to see to in dealing with the prosperity of a given community are the industry of the community itself in all those callings which are essentially local, and the means it has of obtaining *ab extra* what it wants.

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[1] The proportion of the working population in England engaged in manufacturing for export, or in home manufactures where foreign competition is possible, does not probably exceed 20 per cent. See *supra*, vol. ii., p. 151.

[2] Mr. Balfour's reference to the island of St. Vincent, which can grow nothing but sugar, was a mere academical illustration.

Applying these principles, then, to the case of the United Kingdom, the main practical question to be considered is (1) the amount and proportion to the whole industry of the community of the *ab extra* things which the community requires; and (2) the facilities and conditions under which these *ab extra* things are obtained. If the proportion required is not unusually large, and if it is well within the resources of the community, then the conditions for maintaining that community's independence and prosperity, given a climate suitable for carrying on industry and for residence, are also not unfavourable. Everything, as already stated, practically depends on the mutual industry of the people themselves.

A *third* point for inquiry will, of course, be the disposition and equipment of the community for carrying on the home services and exchanges. It may almost be assumed, in the case of an old country, that in this respect there can be no lack, a long-established community having necessarily brought much to perfection which facilitates industry in every form and makes the objects of civilised existence more easily attainable than elsewhere. But the point nevertheless ought perhaps to be formally dealt with.

We begin then by inquiring as to the amount of the things required from abroad in the United Kingdom, and the proportion to the whole income of the people, from capital as well as labour, and from investments abroad as well as at home. These requirements, according to the last Annual Statement of Trade (for 1902[1]), are valued in the gross as follows:

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[1] There are later figures for 1903, but it is more convenient to take 1902 as that to which the last Annual Statement relates. I should think also 1902 is on the whole a better average year than 1903.

	Mln. £'s.	Mln. £'s.
General Imports		529
Add—		
Excess of imports of gold and silver over exports		5
		534
Deduct—		
Re-exports	66	
,, contained in manufactures exported, estimated	70	
		136
Net imports for home consumption		398

Thus we have to obtain from abroad for our home consumption, in round figures, about £400,000,000 worth a year.

The figures show how this sum is arrived at with sufficient clearness, I hope, for those who are accustomed to handle import and export statistics; but as the sum is a little unusual it may be expedient to give a short explanation on one point. This is with regard to the "Re-exports." Everybody is agreed that in order to show what we import for our own consumption the exports of foreign and colonial produce—otherwise the re-exports—ought to be deducted from the imports themselves. So far there is nothing unusual in the above table. The deduction of £66,000,000 for re-exports will be universally allowed. It appears necessary, however, to go a step further and make another deduction of £70,000,000 as above shown. The reason is that the exports of British and Irish produce themselves also contain a mixture of re-exports. When we send away cotton or woollen manufactures to other countries, we send not merely the produce of British labour and capital, but much raw material previously imported from other countries to which our industry has only been applied. Such raw material is manifestly a "re-export" in another form, and ought to be deducted, therefore, from the imports, along with the re-exports so-called, in order to show how much we import for home consumption. The sum at which this additional re-export is here estimated is £70,000,000, a point to be afterwards referred to, but much or little the sum beyond all question should be taken into account.

Estimating, then, at £400,000,000 the amount which we import from abroad for home consumption, we have next to inquire as to its proportion to the total income of the people. Is it a large sum in proportion to our total income or not?

As far as can be judged it is by no means an excessive or unusual amount, looking at the experience of other countries. It is about one-fourth to one-fifth of the total income of the country, which cannot be less than £1,750,000,000, and is almost certainly more.[1] But cases where communities export a fifth, a fourth, or even a third of their income in order to maintain their economic independence are not uncommon. It would probably be found that almost all newly-settled countries have to export some such proportion. Canada, Australia, India, Egypt, for instance, all export so much as to show that the proportion to their income must be very large. Among the great states such as Germany, France, and the United Kingdom, the proportion of the United Kingdom appears the highest, which is no doubt owing specially, I should say, to the necessity of importing food articles from which the United States at least is exempt, and where Germany and France, though partially under the same necessity, are not so yet in the same degree that we are, though they are both, but especially Germany, tending that way. In any case, whatever the proportion is, and however it compares with other countries, our resources for obtaining the £398,000,000 annually without strain seem more than sufficient, and this is the next point for examination.

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[1] Statement by Mr. Bowley at Southport meeting of the British Association for Advancement of Science, 1903.

What we find, in fact, on making this examination is that we obtain from abroad what we want in three ways: (1) by means of an income from capital invested and employed abroad, including the salaries and remuneration of subjects of the United Kingdom employed abroad; (2) by means of the exports of the net produce of British capital and labour,—what are commonly known as our exports,—deducting, however, for the reasons above given, the raw material contained in these exports which had been previously imported; and (3) by means of the earnings of our ships employed in the foreign trade, less any part of such earnings that may be spent abroad; also the earnings of our merchants and bankers in the large commission business which is carried on in the City and elsewhere. In the minute study of the subject various minor questions as to the balance of trade would have to be considered. Some of our imports, for instance, really balance the expenditure of American and other tourists and settlers in our midst, so that even the £398,000,000 above stated may be in excess of the real figure we have now to deal with. Contrariwise, a portion of our exports is required to balance the expenditure of Englishmen abroad. There are also times when we are investing abroad, so that part of our foreign income on balance does not in fact come home. But any such questions may be put aside for the present. Substantially what we import from abroad, as above described, consists of things required by the community at home, and the amount must be set off either by our income from property or services abroad; or by our "exports"; or by the earnings of our ships and our commissions as bankers and merchants. In no respect, however, does an examination of these different ways of setting off our imports suggest any strain.

Let us turn *first* to the income from our foreign investments as the easiest mode of obtaining our imports from abroad. Like the wealthy residents of a purely residential town such as Southport, Eastbourne, or Bournemouth, where none but local industries are carried on and there is substantially no export, the United Kingdom obtains so far what it wants from abroad because it is the owner of property abroad. It is quite conceivable theoretically that a particular country might obtain all its foreign supplies in this way, and produce nothing at all for export, and there is no doubt, at any rate, of the existence of several countries which are more or less in this favourable position—Holland, Belgium, France, and Germany being all countries of this description, to which perhaps the Scandinavian countries should be added.

In the case of the United Kingdom the income from foreign investments is an enormous sum. At least about £90,000,000 of the £398,000,000 that we import from abroad for consumption is obtainable in this manner. This was the estimate of the Chancellor of the Exchequer a few years ago, and the figure is probably more. The Inland Revenue Department knows of over £60,000,000 derived from foreign securities on which income tax is expressly paid, and there are other large sums, consisting of the profits of individuals and firms having estates or doing business abroad, where the income tax is otherwise paid, and not expressly as on foreign income.[1] The sum of £90,000,000 is thus very easily arrived at.

It need not be argued how valuable an asset this foreign income is as a means of enabling the community of the United Kingdom to obtain supplies from abroad. The community begins each year with an annual foreign credit of at least £90,000,000, and so far gets what it requires without giving an equivalent at all. I have seen it argued, indeed, that this large annual credit on the foreigner is a misfortune for us. But for it, we are told, people would have to work in some way to obtain the needful foreign supplies, and it is assumed that way would be manufacture, which would be good for the manufacturing industries! Those who argue, however, that our wealth is a misfortune may be left to argue. Such misfortunes are only too easily borne.

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[1] See Forty-sixth Report of Inland Revenue Department (section Income Tax, p. 173).

Nothing need be said in detail as to the way in which this foreign income from property is supplemented by the remuneration of subjects of the United Kingdom employed abroad, *e.g.*, in India, South Africa, and other parts of the world, though the amount is no doubt very large—much larger than any amount for which the United Kingdom is a debtor in respect of foreigners there employed. When our income from abroad is referred to, however, and an attempt made to narrow it in every possible way, the variety of its sources should be kept in mind. It is convenient to deal with the main and obvious items, but not so easy to get hold of every sum which ought to come into the account.

The *second* item of set-off we have to examine is the exports. How much do we export, and what?

Answering the question of how much, we find the gross export so-called of British and Irish produce and manufactures to amount to £284,000,000; but rectifying this amount by deducting the above sum of £70,000,000 for raw material previously imported, and re-exported in a manufactured form, we arrive at a sum of £214,000,000 as the sum of exports of the net produce of our labour and capital which goes away in order to obtain from abroad the things which we require for home consumption. In other words, we get about half the foreign things we require (£398,000,000 altogether) by means of our "export" trade.

The main items of this sum are set out in the accompanying table, which is also so arranged as to exhibit in detail the estimated deductions from the official figures of exports of British and Irish produce on account of the raw material contained in them which had been previously imported:—

Exports of British and Irish Produce and Manufactures in 1902, *less value of Raw Materials previously imported contained in the manufactures exported.*

[In 1000's.]

	Total.	Less Raw Material Imported.	Net Total.
	£	£	£
1. Living animals	824		
2. Articles of food and drink[1] . . .	16,440		17,264
3. Raw materials— (*a*) Coal, £27,581; (*b*) Raw hides, £370; (*c*) Wool, £931; (*d*) Other articles, £2,289 . .			31,171
4. Yarns and textile fabrics—			
(*a*) Cotton	65,040	33	
(*b*) Other textiles	38,300	19	
	103,340	52	51,340
5. Metals and manufactures from metals including machinery and ships	67,256	10	57,256
6. Miscellaneous: including Classes IV., E, F, and G, in monthly Board of Trade Returns, and H, Parcel Post	64,511	8	56,511
Total	233,542	70[2]	213,542

Summing up this table, what we find is that of the £214,000,000 of net exports, the sum of £17,264,000, or 8 per cent., consists of "living animals" and "articles of food"; there is another sum of £31,171,000, or 15 per cent., for raw materials, chiefly coal, exported;

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[1] These include articles like refined sugar, which are strictly speaking manufactures, and in which raw material previously imported is used; but the amounts are not large enough to make a deduction for the present purpose necessary.

[2] Of course the estimates in this column are exceedingly rough, though giving some idea of the problem. It may be hoped that the subject will be farther investigated.

while the remainder, £165,000,000, or 77 per cent., consists of "manufactures" divided into three groups of nearly equal amount, viz.: textiles, £51,340,000; metals and manufactures thereof, £57,256,000; and miscellaneous manufactures, £56,511,000. Much has been said lately as to the growing importance of coal and raw materials in our exports, and the diminishing importance of our manufactures, but it can hardly be said, I think, that a proportion of 23 per cent. only for food and raw materials among the exports of a manufacturing country is a very high one or alters in any way the impression that our exports are chiefly of manufactures. The relative proportion of the different groups of manufactures themselves appears to suggest something more deserving of remark. There is a common impression that the exports of textile manufactures are by far the most important to us. This was undoubtedly the case many years ago. But when the figures are rectified, so as to compare with each other in respect of the net produce of labour and capital they contain, it is found that the exports of textile manufactures constitute only one of three groups into which these exports of manufactures may be divided, and that the headings of "metals" and "miscellaneous" each rather exceed in importance the textile group. It has long been noted by English economists who are also men of business that this miscellaneous group was increasing in importance. This was especially a constant theme of Mr. Newmarch in his last papers read to the Statistical Society. It suggests, obviously, the magnitude of changes in the course of business which are constantly going on. It may well be that a leading cause of our textile exports declining relatively in importance is largely due to the growth of human wants in all directions which are forcing business into new channels, and that the smaller place of textiles in our exports is a sign of progress and not of retrogression.

As far as the present question is concerned, it may be pointed out that while the appearance of articles of food and raw materials as accounting for 23 per cent. of our exports does not take away in any degree from our quality as a nation manufacturing for export, yet the fact of our having so much to export of articles of this sort indicates that we obtain easily much of what we want from abroad. We are not labouring exclusively in things where we compete under difficulties with all the world, but we have something to sell, coal, which is in the nature of a monopoly, and for which all nations now come to us. This proceeding may raise all sorts of questions as to our parting with capital and so on, which are no doubt most important from the point of view first discussed by Mr. Jevons, but, for the present at least, and in an economic view, the community of the United Kingdom appears to occupy a most advantageous position in relation to other communities. With regard to the other groups of our exports also, the "manufactures," it may also be pointed out that we have to do here not simply with the net produce of "manufacturing," after deducting foreign raw material imported; but that the amounts must include coal and other raw material obtained at home and used up in the articles we export, so that not even the total of £165,000,000 constitutes our "manufacturing" for export. In other words, out of the aggregate income of the community estimated at more than £1,750,000,000, we are only dependent on manufacturing for export to the extent of less than £165,000,000, or at the outside about 8 per cent. of the whole. We obtain the remainder by exporting something more easily procured of which we have a practical monopoly.

It must not be considered, moreover, that the whole of our net manufacturing for export is produced with "difficulty," so that we are maintaining an uphill fight for our economic independence. On the contrary, there are lines of manufactures where skill and experience and previous possession of markets give a practical monopoly, and where the high duties imposed by foreign countries are not in the nature of a tariff wall protecting their home manufacturers, for there are no corresponding home manufactures to protect, but are really revenue duties like our own duties on tea, wine, tobacco and spirits, which are very high *ad valorem*, but are in no way protective in their operation.

We come, then, to the third item in our list of the means by which this country obtains *ab extra* what it requires, viz.: the earnings of our ships employed in the foreign trade less any portion of such earnings spent abroad; plus the commissions to which we are entitled as merchants and bankers doing certain work for foreign trade all over the world. This is a source of importing power which is not an export so-called, but which is strictly speaking analogous to that of the exports themselves. Many years ago I called it an invisible export,[1] and the name has remained. The reason for claiming credit for this business is surely not open to doubt. If we run ships to carry goods all over the world, or if we do commission and agency business for people in every country, this is not for nothing, but we are to be paid for our services. Whatever these cost we must charge, plus a reasonable profit, one year with another, in addition; and this charge is to our credit in international dealing as much as the piece goods, or machinery, or coal, which we put on board ship for export so-called. The payment likewise must come in the form of imports, cash or something else, unless an equivalent amount is invested abroad, which would swell yet more the total foreign investments yielding an income which is the first item on our list. Freight may be paid abroad sometimes, though London is the usual place, but the receiver of the freight abroad immediately buys bills on London with the proceeds, less any expense abroad which the foreigner has to meet, and this he can only do by sending goods to London. Thus, whether freight is paid abroad or in London, the result is the same, the remittance of goods to pay what has been earned by our shipping and agency business, which forms a charge against the foreigner.

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[1] See *supra*, "The Use of Import and Export Statistics," vol. i., p. 283 *et seq.*

The amount coming to our credit annually in these ways cannot but be enormous. As far as shipping is concerned, we are the owners of no less than 10,000,000 net registered tons of shipping, including over 8,000,000 tons of steam shipping. Our annual earnings, therefore, cannot be less than £80,000,000, which is little more than £8 per ton on the average. I need not go into detail, as the matter has been so much discussed, but may refer to my former essays.[1] The main point to insist upon is that the data are mostly on the surface and can be easily checked. Freights in different trades and the amount of shipping employed are well known to many. So are the chief items of expense—the wages and provisioning of crews, the coal used, the dock and harbour dues, the repairs and renewals, the insurance, and so on. Wrong estimates are possible, but those who consider the subject are bound to investigate, and cannot ignore the item when there is so much to put them on inquiry.

The commissions and brokerages of our merchant and banking business for foreign customers appear likewise to be moderately estimated at £20,000,000. A usual charge by a merchant banker for "accepting" is 1 per cent., which would come to about £5,000,000 on the amount of our imports alone, while there are other charges for discount, brokerages on sales of goods consigned, and commissions on goods in transit, which have all to be paid by the foreigner who sends the goods to our markets. The matter is one for estimate, mainly by City men, but the estimate of £20,000,000 has not, I believe, been thought excessive.

Under these two sub-heads, then, the earnings of our ships, and the earnings of our commission and foreign banking business, there is an invisible export of about

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[1] See *supra*, "The Use of Import and Export Statistics," vol. i., p. 283; also "The Excess of Imports," Statistical Society's Journal, March, 1898.

£100,000,000, so that in fact our shipping and commission business equals in importance the income from our foreign investments. It counts in this matter for about half only of our export business so-called which amounts to £214,000,000, but if we reckon only our manufacturing for export it is much more than a half, being in the proportion of one to one and a half. Our manufacturing for export *eo nomine* thus holds a smaller place in the economy of our international trade than is commonly supposed, although of course our earnings of freight are really exports in another form, and give similar employment to our metal industries, for instance, as the exports so-called do.

The question with which we set out is thus answered as far as the United Kingdom is concerned. Having to obtain £398,000,000 annually for our consumption from abroad, we have the following credits:

	Mln. £'s.	Mln. £'s.
1. Income from foreign investments, etc. (*under-estimated*)		90
2. Raw materials and articles of food and drink exported		48
3. Net manufacturing produce exported, including some raw material of home production		165
4. "Invisible exports"—		
a. Earnings of ships	80	
b. Commissions and brokerage	20	
	—	100
Total		403

A consideration of the items suggests that so fa from its being difficult for the United Kingdom to procure its necessary imports, the balance in some years, owing to its commanding position, must be very much in its favour. Its assets for purchase are so enormous that if a strict account could be taken it would be found that continuous investment abroad is still going on one year with another, increasing our purchasing power in the future, and diminishing still farther the effort needed to obtain what we require abroad.

The final point for our inquiry according to the programme above laid down is the suitability of the United Kingdom as a place of residence and industry, assuming that what is required from abroad can be obtained easily. As already stated, a favourable answer on this head may be taken for granted in the case of an old country like the United Kingdom; but a more formal treatment is proposed, as the wonderful combination of circumstances in our favour is inadequately realised.

Climate is a condition on which much might be written, but the historical opinion that England is a country where you can be out of doors more days than in any other sums up generally the climatic conditions in our favour. Temperateness is the characteristic which our climate possesses in greater degree than that of any of our western European neighbours that come nearest to us in the matter. That other communities, like the United States and Canada, find a drawback in climatic conditions to many industrial advantages they possess appears undoubted. They are countries of extremes, where it costs more for food, shelter and clothing to permit of the same work to be done than it costs in the United Kingdom; and this difference of cost is a considerable advantage to us. Our place of residence has been improved, moreover, by generations of workers, who have executed drainage and sanitary improvements, built roads, streets, walls and fences; created parks, gardens and lawns; and generally increased the amenities of life for a huge town population, such as a population must be that brings its food and raw materials mainly from a distance.

The next advantage we possess in addition to climate and the artificial amenity of the land for residence is compactness of situation. All the different parts of the country are close together, well connected by railways, road and sea, while the sea, of course, affords perfect access to the rest of the world. The United Kingdom is more like a single huge city than a country of districts and towns separated by wide intervals. This is no small advantage for local industry, as it places consumers and producers side by side, just as if they were in a small village with its own neighbourhood, complete in itself.

The equipment of machinery and buildings for the local industries to be carried on has likewise every facility. There is, perhaps, a temptation to carelessness in obtaining the newest and best equipment, as so much can be done with less, owing to our favourable conditions; but it is entirely our own fault if the best is not always done. Hereditary skill and training are likewise consequences of the past which we must long retain and along with this a perfection of subsidiary industries which facilitates the great industries themselves, as those who attempt to set up manufactures in new countries will understand. There are many daily wants of great manufactures which are supplied by subsidiary industries in all our large manufacturing centres, and these are not brought into existence in a day.

A fourth advantage we possess in following our own home industries is the large importation of raw materials to be used up in our export trade. This helps to make a better market here for all similar materials used in the home trade itself. The one market helps the other, with the result that if there is abundance and variety anywhere it is here. We always get the first offer. This applies, it should be understood, no merely to the raw material we obtain for the manufactures for export so-called; but to the raw material we import in order to carry on such industries as coa mining, and those other industries, such as shipowning and shipbuilding, which enable us to make invisibl exports. Because we have this enormous importation we are in a better position to practise to the fullest advantage all those industries where we work and exchange amongst ourselves.

The fifth advantage is of the same kind, though it requires special mention. This is, that the United Kingdom is a country of free imports, not merely as regards raw material, but as regards articles of food and manufactured articles of all kinds. "Free imports" may not be the same thing as "free trade," as we are frequently told; but it is of no small advantage in some ways to be a "free port." A free port means abundance and variety of everything at the lowest market price. However some individuals may suffer at times, the compensating advantage to the community as a whole, in which the sufferers participate, is immense, and ought not to be lightly regarded. In passing, however, I must say that I for one do not believe that many individuals have suffered by free imports who did not deserve to do so by reason of their own indolence and lack of foresight and intelligence.

Finally, we have an immense advantage in the United Kingdom in the development of our free banking system, and the bankers' tradition of assisting trade by advances to manufacturers and tradesmen. Our banks are full of money which comes to them from all parts of the earth, and every man who has anything to attempt in trade, if he has any property of his own, or can persuade people with property to trust him, may have ready money lent him by the bank. The tales I have heard of a different condition of things elsewhere are simply astonishing to business people in the United Kingdom, who do not know what it is to go without money to carry on their business because the banks themselves have got none to lend. Yet what is unknown here is frequent in the Far West of the United States and in all new countries, and is not unknown on the Continent, ready as Continental banks are to do financial business with which the prudent trader is not concerned.

These are all assets to the good which facilitate every form of home industry, so that the United Kingdom, if it is not so well placed as other nations for the rimary industries of agriculture and mining, has yet dvantages of its own as a place of residence and for arrying on all other industries, in which no other comnunity excels it.

In all respects, then, the conditions for the industrial uture of the country into which we have been inquiring re satisfactory. The amount and proportion of the hings we require to import from abroad are not exeptionally large, and we are not in fact put to any xceptional strain in obtaining them. By means of our oreign investments; our exports of certain raw materials f which we have a monopoly; our exports of manufactures *eo nomine*; and the earnings of our ships and other earnings—our invisible exports, as they are called—we do obtain easily enough all that we require, and the conditions up to the latest date remain unchanged. Finally, the United Kingdom is exceptionally favoured by its climate and in other ways as a place of residence and for carrying on all kinds of miscellaneous industries, while it has special advantages as a free and large market, due largely to its system of free imports, and enjoys unequalled banking facilities. If we do not succeed, therefore, in the future as in the past, it must be our own fault. Although we have many defects, there is yet no sign of want of success.

The discussion might be left at this point, but it may be convenient to refer to one or two notions of a misleading kind which have been at the basis of a great deal of the recent fiscal agitation, and which are based in turn on a fundamental misconception of the relative proportion of different functions of the economic organism. They are the fair-trade ideas which have been cropping up at intervals during the last thirty years, long before the full-blown development which has now taken place at Mr. Chamberlain's signal; full of fallacies which the average fair-trader is quite unable to shake off.

One of these misleading notions is that great as our prosperity is, it is "undermined." Our primary industries, it is said, are decaying; our agriculture, our iron mining, other industries of a primary manufacturing kind, such as the making of pig-iron and steel, of iron and steel bars, and so on. In the same way, it is said, we are not getting on with our leading manufactures for export—our cotton and woollen manufactures, not to speak of such "lost" industries as the silk manufacture, tin-plate making, glass manufacture and so on. Farther, even our home manufactures, or rather our manufactures for home consumption, are being attacked, and have been attacked for many years, by the imports of foreign manufactures, so that the production in these particular industries does not increase as it should, and they are no longer so profitable as they were. We are prosperous generally, it is admitted, but the indications for the future are bad. This "case" is sadly defective in detail when analysed. In many respects we hold our own better than is supposed in regard to those industries where decay is alleged, while foreign competition mostly supplements, and by no means supplants, the home industries with which it is engaged. Nor is foreign competition, as far as it is effective, the consequence of the protectionist measures of foreign countries which we can possibly counteract. But leaving aside this obvious criticism, what I desire to point out is that the ideas themselves assume the desirability and possibility of a community choosing deliberately, and by means of its legislature, a different economic development from that which the natural play of economic forces gives it. The free play of those forces in the United Kingdom has led to an unexampled development of secondary and what we may call tertiary industries, the whole of an increasing population being as a final result, fully employed; but it would have been better, we are told, if the development had taken a different form. As Mr. Chamberlain put it in one of his speeches, he could conceive of a prosperous community without primary industries and depending largely on the prosperity of residents who derived an income from foreign investments; but prosperity of this sort was not desirable for a great state. The "form" of economic development is thus regarded as important, and there is much, it is assumed, which is unsatisfactory in ours. To this whole conception I demur. Economic conditions like those which have come to exist in England display themselves when the time comes, and it is best to let the community adapt itself to the changes in its own way. That modifications may be introduced by legislation for political reasons is, no doubt, theoretically admissible; but practically the limits of any such political action must be circumscribed if a nation is to possess real economic independence.

How important a natural development is we can see, as regards the primary industries themselves, agriculture and mining. Surely no one supposes for a moment that a population of 42,000,000 in the United Kingdom could be supported by its own agriculture or can derive from that agriculture what it wants for its miscellaneous industries. To do so there should be 12,000,000 acres under wheat,[1] double the acreage that has ever been so cultivated; with a similar increase, as compared with the present, of barley, oats, and other crops; along with an enormous increase of cattle, sheep and pigs. The change in our agriculture, to make us self-supporting as regards food, is accordingly inconceivable. Even so we should still not be self-supporting in other respects as regards agricultural products. We should still be wanting in wool unless our sheep were multiplied three or four times or more; while of course we should remain as dependent as ever for cotton, jute silk, sugar, and other agricultural products, which the United Kingdom is not adapted to produce. Substantially, then, our agriculture must have taken the course it has taken. Always we must be dependent on foreign imports, in whatever degree we increase the home supply by giving it an artificial price.

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[1] The average yield per acre of wheat would of course diminish with the increase of area, and this allows for three quarters per acre as against an average of 3½ for many years.

It is the same with mining. For a long time, about thirty years, we have been importing iron ore in increasing quantities, and this follows on a gradual substitution of foreign supplies for home in the case of copper, white tin, zinc and lead.[1] Resort to foreign countries has become essential by the exhaustion of our own mines, just as it has been essential for centuries as regards gold and silver themselves, and is so for many other metals and minerals not produced at all, or not produced in any quantity, in the United Kingdom. In coal mining we are still among the leading communities, and coal mining, as we all know, has even developed wonderfully of late, while other mining industries have been decaying; but the general circumstances also point to a change in the future as regards our coal mining, from circumstances quite beyond our control.

In regard to our primary industries, then, I should say that the complaints of fair-traders, as far as they correctly describe what has occurred, merely refer to changes which have been quite inevitable in our economic development, and which no foresight and no action could prevent. However protectionist we might have been we should have arrived at the same result if we had had an increasing population. Probably under protection population would not have increased as it has done, but our general prosperity in that case would have been less than it has been.

Much the same may be said of those manufacturing industries by which we obtain in part the things we require from abroad. Some of the leading manufactures have not developed as they did in former years, and this is a serious matter, we are told, for a country which must obtain so much from abroad. Here the fair-trade case specially requires examination in detail. But apart from that, what is immediately obvious is the actual occupation of a growing community on the one side, and its ability, on the other side, to obtain what it wants by exporting "something" abroad, either in the shape of manufactures so-called, or of those invisible exports which have been above described.[1] If the population is not occupied in one way, it is occupied in another; and the result is surely the best decision of the question of the relative merits of the employments. We may assume without any question that it is in the growing employments that wages are highest; and that in the older manufactures, which grow at a less rate, or perhaps diminish a little, the real difficulty is to obtain labour at a profitable rate when there is so good a demand for it in other directions. Along with the new developments the more profitable parts of the older groups of manufactures remain, and it is the weaker parts, which the workmen leave to find better employment, that shrink. Change of employment is, of course, a serious matter for workmen who have been trained to do certain things, but new machinery and new growths, indirect as well as direct, involve such changes, which workmen, like all others, must make the best of. Much prejudice has been imported into the discussion by assertions that the dice have been loaded by foreign protectionist governments, whose high tariffs prevent the importation of British manufactures while our markets are free, and so on. As a matter of fact, however, the real difficulty in the way of our exporting to what are called protective manufacturing countries with high tariffs, apart from the want of demand owing to changes of fashion and the like, is the ability of those countries to compete with us even in neutral markets, and our own home markets, without any tariff protection at all. The supposition that they do so only by the various processes of "dumping" or by having a larger market than our manufacturers have, because they have their own and ours as well, is too absurd for serious argument. In any case, the main point surely is that our people are fully employed, whatever barriers are shut against us, and that no hard and fast rule can be laid down as to certain particular employments being always indispensable, although without them we are fully employed and can easily obtain from abroad all that we require.

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[1] See *supra*, "The Recent Rate of Material Progress in England," vol. ii., p. 105.

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[1] See *supra*, vol. ii., pp. 417, 418 *et seq.*

As regards our manufactures for home consumption which are also invaded by the foreigner, the same may again be said. The people who feel the stress of competition are naturally alarmed and cry out. The foreigner, with his smaller wages, sends in his goods and "takes the bread out of their mouths." This often means when analysed that in certain employments there is a difficulty in maintaining the high current rate of wage which has been established in similar employments here; but after a time employment is found elsewhere, and the complaints cease. There can be no case of a growing army of unemployed. If there were such, the rates of wages generally could not be maintained.[1]

The signs that our whole industrial position is undermined, as fair-traders contend, in consequence of changes in the general character of employment throughout the country, are thus entirely wanting. On the contrary, the country has developed on natural lines, undergoing the changes necessitated by the inevitable decay and loss of primary industries with the minimum of friction, and equally meeting the changes from one employment to another necessitated by the advance of society itself. Why should not the same process of adaptation continue?

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[1] See also the above essay on "The Recent Rate of Material Progress in England," vol. ii., p. 89 *et seq.*, for a discussion of these and other points connected with our present economic position. See also the above essay on "Protection for Manufactures in New Countries," vol. ii., p. 151, for a statement as to the small proportion of population in any country engaged in manufacturing for export, or in home manufactures where foreign competition is possible.

We may fairly expect our miscellaneous exports, invisible as well as visible, and our miscellaneous manufactures for home consumption to grow, though it is quite impossible to anticipate where the growth will be or where there may be relative and even actual decay. A hundred years ago canals and roads occupied the place now held by railways and tramways. As yet gas was not, the electric light had not been so much as imagined, and petroleum was equally unthought of; still less were the improvements in steam and navigation in any way anticipated. We cannot tell whether equally revolutionary inventions may not be at hand, changing the uses and powers of the metals and of innumerable agricultural products, and giving an entirely new direction to different industries and different groups. To stereotype the present conditions by using artificial means to maintain industries which appear to our short-sighted ideas indispensable, but which may be the least fitted to survive, cannot but be the extremest folly. Even if we knew more exactly than is possible what is coming, we should have no power to prevent the substantial changes, but we cannot even look forward for a single generation. The members of the community acting individually will adapt themselves to the new circumstances almost without knowing, the time their legislatures and governments would be plunging widely if they took the matter in hand.

There is nothing accordingly in the fair-trade ideas and suggestions to alter the view we have taken of the economic outlook. They are quite irrelevant in reality to the question of economic development. There is no reason consequently why we should not look forward cheerfully, basing our anticipations on the continuation of a natural evolution to which there appears as yet no sign of a check. Possibly disturbance may come if by any chance our governments should be foolish enough to let fair-trade nostrums have a trial. But there is really little fear, I imagine, that fair-trade will ever get so far, while it is also possible that if it did, its power for mischief would be limited by the smallness of the measures as yet suggested, of which the ineffectual colonial preferences Mr. Chamberlain has talked of are specimens. The dose of protection would of course be of a poisonous nature, but a small dose, after all, might leave our substantial business comparatively untouched. Big doses of protection are in truth impossible under modern conditions.[1] There is more serious danger perhaps to our commercial prosperity, as to that of other nations, in the chances of war among the great civilised powers. But these we may forbear to discuss. They are on the knees of the gods. Still, it is impossible not to think of wars and what may come of them in the midst of the Russo-Japanese debates and the strained preparations of all the leading powers. War may thus alter the entire economic development of the century, as it affected beyond a doubt at the very beginning the developments of the century which has just come to an end.

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[1] See *supra*, vol. ii., p. 159.

THE END.

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